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A new psychodynamic conceptualization of career adjustment: Validation of the DCS (Dynamic Career Scale) and experimental evaluation of the PICS (Psychodynamic Intervention for Career Strategies) program

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PREFACE

This work stems from the desire to provide a psychodynamic frame for research and intervention with specific regard to work and career-related field, thus enriching the psychoanalytic realm by integrating psychoanalytic constructs and their operationalization in empirical research. The contemporary labor market is more and more characterized by instability and continuous changing in terms of employability, competencies and demands, also due to the role of economic globalization. This impacts on career construction and development paths and more widely on people's psychosocial adjustment because work is a meaningful part of our lives. Besides, the social relevance of work may be advocated with regard to its influence on organizational efficiency and productivity, as well as on societal wealth and economic development. Despite psychology having dealt with work and career related issues for several decades, the psychoanalytic contributions have not particularly advanced. This is probably due to problems of conceptualization and measurement in the psychoanalytic tradition, which probably prevented the psychodynamic approach from having a substantive presence in current career development literature (Mcllveen, 2014) and from being commonly used in career guidance and career counseling (Lehman, Ribeiro, Uvaldo, & Da Silva, 2015).

Overall, this work contributes to broad a clinical psychological perspective in work and career fields by means of the operationalization of psychodynamic constructs pertaining to unconscious processes affecting career, the development of a psychological intervention model for favoring career adjustment across different stages of professional growth and, ultimately, the evaluation of its potential effectiveness.

Specifically, *Chapter 1* provides a psychodynamic conceptualization of career adjustment grounded on Klein's object relations theory and a rigorous empirical evaluation of its potential validity. For this purpose, the Dynamic Career Scale (DCS) was developed for the measurement of four main constructs (mania, envy, manic reparation, and true reparation), as different modes of functioning in facing career failures and challenges which can provide new insights about unconscious processes potentially affecting career decisions, strategies and adjustment. Two studies were conducted on adult working

participants (N = 260, Study 1) and newly-qualified psychologists (N=196, Study 2), which contributed to the validation of the DCS dimensions.

Chapter 2 aims at proposing the PICS (Psychodynamic Intervention for Career Strategies) program, consisting in a five-session group career counseling intervention, inspired by the Kleinian psychoanalytic theory, in order to contribute to the advancement of studies in psychodynamic-oriented career counselling practices. In the light of a critical analysis of current research in career and work psychology, this conceptualization could provide new insights about not only vocational choices but more widely unconscious processes potentially affecting career decisions, strategies and adjustment. In detail, the manuscripts deals with the conceptual model of the intervention and its technical aspects, including career counseling objectives, the structure of the intervention, and the description of career sessions to clearly present the main methodological aspects involved. As well, further information about the counselor's function, strategies and procedures, and monitoring and assessment is provided. Ultimately, potentialities and limitations of this group career intervention are discussed.

Chapter 3 aims at extending the research into the effectiveness of psychodynamic-oriented career interventions for improving career adjustment. This was by testing the short and long term effects of the PICS (Psychodynamic Intervention for Career Strategies) program through a RCT conducted on a sample of psychology professionals entering the labor market. It was hypothesized that after completing the program – at posttest and at 6-month follow-up - participants would have higher scores on measures of career adaptability (assumed as primary outcome) and other secondary career-related outcomes, such as search for work self-efficacy, work self-efficacy, career adjustment dynamics, affective investment at work, job search intensity, job search effort, career satisfaction, job relations satisfaction, job relations satisfaction and job self-promotion.

CHAPTER 1

Towards a new psychodynamic conceptualization of career adjustment:

Dynamic Career Scale (DCS)

Although the skills promoted by career decision-making models based on information processing, social cognition, and person-environment fit are useful for general career success, they do not seem to adequately meet the demands of a global society and the current economy (Bland & Roberts-Pittman, 2014). New theoretical constructs have been developed aiming to grasp the dynamic interaction between the individual and the work context, such as career adaptability (Super & Knasel, 1981), shifting attention from maturation as readiness for decision making to adaptability as readiness to cope with changing work and work conditions. This concept was later undertaken by Savickas (1997), who emphasized the "continual need to respond to new circumstances and novel situations, rather than to master a predictable linear continuum of developmental tasks" (p. 254). From career construction theory, career development and adjustment involve attitudes, beliefs and competencies which shape the actual problem-solving strategies and coping behaviors that individuals use to synthesize their vocational self-concepts with work roles (Savickas & Porfeli, 2012). However, despite the relevance of personal confidence and self-attributions, some researchers suggested to consider further personal psychological resources for career adjustment such as the use of emotions in the service of cognitive functioning (Herr, Cramer, & Niles, 2004) as well as tolerance for uncertainty and ambiguity, and resilience to career obstacles and frustrations (Goodman, 1994). To expand, career adjustment is demonstrated to be biased by imagined and unconscious barriers which "may lead to procrastination in career decision-making or to making less than optimal career-decision" (Levin & Gati, 2015, p. 168). Consistently with the dual processing model proposed in neuroscience (Epstein, 1994; Kahneman, 2003) and given the relevance of unconscious dynamics for both motivation in the context of work identity (Driver, 2017) and identity construction in times of career change (Hoyer & Steyaert, 2015), it would be more appropriate to consider both rational/conscious and intuitive/unconscious processes as mutually informing career decisions and strategies and, ultimately, career adjustment (Krieshok, Black, & McKay, 2009). Among several psychodynamic perspectives in vocational and career field, object

relations theory seems to be one the most fruitful approaches to grasp unconscious determinants of vocational choice (Malach-Pines & Yafe-Yanai, 1999), work motivation (Solem, 2016) and organizational dynamics (Diamond, Allcorn, & Stein, 2016), contributing to the most recent developments of career guidance and counseling (Lehman, Ribeiro, Uvaldo, & Da Silva, 2015).

1.1 Object relations theory and career adjustment

Klein's object relations theory emphasized a model of development in which anxieties, defenses and object relations are grouped in constellations which represent overlapping and fluctuating modes of mental functioning, ultimately resulting in the paranoid-schizoid and the depressive position. The former is characterized by paranoid anxieties and primitive defenses (splitting, projective identification, idealization), which aim at keeping the bad external persecuting object as far as possible from the good internal object, thus creating an ideal object relation. The latter is featured by concern about the fate of the object that the child has destroyed in fantasy, as the object is now perceived as being the same as the loved and good object. This results in depressive anxiety replacing destructive urges with guilt, requiring reparation through restorative fantasies. The painful sense of distinction between self and object and between the real and the ideal object gradually emerges, thus consenting to accept the reality and engage in symbolic thinking.

Consistently with object relations theory, work can be conceived as a symbolic good object because the relationship with it secures for us the sense that our vitality has a place in the inter-psychic world (Levine, 2010), as well vocations reveal the self's need to repair internal objects via the choice of a profession (Bohoslavsky, 1977). Our goal in work is to realize the good we have inside in a world of others, making good exists at two levels: on the first it is the good object itself; on the second it is the good self that can result from repairing the object and the relationship of the self to it (Levine, 2010). Indeed, reparation allows the preservation of the self as well as the relationship with reality, because it is grounded on the capacity to tolerate guilt-feelings related to destructive impulses, face loss and damage, integrate internal and external objects, and develop *ego* capacities by means of autonomous and creative dynamics (Klein, 1957). From this perspective, the construct of reparation has gained increasing attention in career-related adjustment (Bohoslavsky, 1977; Millan et al., 2005; Ruprecht,

2004), as a central process to elaborate past and create future relationship possibilities (Lehman, Ribeiro, Uvaldo, & Da Silva, 2015). Research highlighted that reparation involves mutuality and collaboration at work, because of higher proneness to take responsibility for one's own actions rather than to externalize unwanted parts or emotional states (Krantz, 2006). Indeed, people capable to operate within a depressive mode tend to be more adaptive, less grandiose and able to achieve a "relative potence", which presupposes the ability to mourn and consists in recognizing and accepting both one's own limits and the external reality as it is (Lapierre, 1989). Moreover, because reparation refers to an emotional state which consents to turn gratitude into generosity towards others (Klein, 1957) and thus strengthen the tendency to act positively, its potential relevance can be advocated also in the light of the current research showing how higher experience of gratitude can be a trigger for job satisfaction (Buote, 2014), social support, helpful conduct and cohesiveness among colleagues (Andersson, Giacalone, & Jurkiewicz, 2007; Buote, 2014; Caputo, 2015; Grant & Wrzesniewski, 2010).

However, when the ability to mourn is lacking, accordingly with Kleinian framework (1940), some modes of functioning can emerge which are defensive against the remorse and guilt experienced in the depressive position: manic reparation, mania and envy.

Manic reparation (Klein, 1957) should be distinguished from true reparation because, despite they both aim at restoration, manic reparation is not driven by guilt feelings or sadness and mainly relies on immediate and magical forms of restoration. This means that, in order to face depressive feelings, *ego* takes refuge in a good internal or external object. In this sense, there is no true love or esteem for the object and genuine intention to remedy but the need to confirm the *ego*'s omnipotence which assumes a narcissistic vein. This primitive functioning was described by Krantz (2001) as grandiose, because efforts are characterized by wildly expansive aims and heroic idealization as well as by diminished reality-testing and problem solving. When there is no room for guilt and depressive feelings, because failures and losses are not mourned, people are described as lacking of capacity for empathy at work (Levine, 2010), grandiose in their aims, unrealistic in their expectations, and ultimately unsatisfied and ineffectual in their efforts (Kets de Vries, 2010; Lapierre, 1989). As it may be associated with higher accomplishment, elevated achievement motivation, and ambitious goal setting, because it leads to

unrealistic confidence which may fuel excessive behavioral involvement in ever-higher goals (Johnson, 2005), manic reparation can serve as a way to alleviate guilt feelings, increase confidence and preserve the hope to repair. For instance, in caring work - which is strongly characterized by the provision of reparative activities - workers unconsciously need to confirm that they have sufficient internal goodness to repair damage in others, in order to maintain precarious self-esteem and defend themselves against the retaliation anticipated for failing to heal (Roberts, 1994).

Alternatively to manic reparation, manic defenses, initially conceptualized by Klein (1935) as pertaining to manic position, are considered as reactions to feeling of mourning and guilt in the depressive position when the *ego* loses confidence in the power of its capacity to make reparation. Mania is characterized by a triad of feelings pertaining to the paranoid-schizoid position, which consent to constantly observe and check on bad objects, so that inner bad and persecutory objects can be maniacally subordinated: control, triumph and contempt. In detail, control serves to deny the dependence on the object, triumph denies the depressive feelings of loss or damage of the object, and contempt denies the value and importance of the object. Krantz (2001, 2006) labeled this type of primitive functioning - characterizing the paranoid-schizoid mode - as persecutory, distinguishing it from the grandiose one. Persecutory objects as well as internal anxieties and unwanted impulses are split off, pooled and then projected. This leads to highly compromised functioning because it engenders rigid, concrete thinking, blame, massive projection and diminished capacity for reality testing. People in denial and resorting to manic defenses refuse to admit their inability to actualize their goals and are increasingly ineffective at work (Kets de Vries, 2010) mostly because, under the pressure of persecutory anxieties, splitting, disintegration and denial take place which prevents change and avoids facing external processes (Nicolson, 2015).

A specific functioning which leads to difficulties with depressive position integration and thus with performing reparation is represented by envy, defined as the angry feeling that another person possesses and enjoys something else desirable, often accompanied by an impulse to spoil it (Klein, 1957). Indeed, a central component of this process is the attack to the good object because dependence on it is felt as intolerable. Therefore, differently from mania as a form to escape from depressive

feelings and guilt by splitting good and bad and controlling the bad object, in envy a state of confusion between good and bad exists: the object is both desired and hated. Therefore, given the hopelessness and impoverished *ego*, the destruction of the good object is the only way to deny one's desire to possess the object itself. In this sense, *schadenfreude* represents a relevant component of the envious process as pleasure derived from the misfortune of others who can achieve the good object one is lacking. Despite different conceptualizations of envy emerging from scientific knowledge (Caputo, 2014), previous research has highlighted that envy seems to play an important role especially at work (Vecchio, 2005), where it acts as a counter-productive behavior leading to higher turnover intentions, job and supervisor dissatisfaction (Vecchio, 1995), absenteism (Duffy & Shaw, 2000), emotional disengagement and propensity to leave (Erdil & Müceldili, 2014). Envious people tend to disentangle themselves from concrete personal goals and to use self-handicapping strategies (Lange & Crusius, 2015) and generally show lower career adaptability (Langher, Caputo, Nannini, & Sturiale, 2016). In contrast to admiration, envy tends to produce antagonism and begrudging attitudes towards the outgroup's high status, dislike towards fellow employees who get promoted (Schaubroeck & Lam, 2004) and may result in back-stabbing, harassing or ostracizing (Vecchio, 1995). Envious executives are able to destroy career paths of others working under them, and their actions have a negative effect on organizational morale (Kets de Vries, 2010).

1.2 Aim of the study

This paper aims at proposing a psychodynamic model of career adjustment which, accordingly with Klein's object relations theory, is based on four relevant dimensions: true reparation, manic reparation, mania and envy. These dimensions are conceived as symbolic and relational dynamics – potentially coexisting and interacting each other – which can grasp unconscious processes in career adjustment.

Without excluding the role of rational processes and beliefs informing career adjustment; we consider career as a symbolic object that is given also affective and emotional meanings. Consistently with object relations theory, this symbolic object refers to both a complex external object including several aspects of the reality - such as work context, professional status, relationships with managers and colleagues, job achievements - and to a complex inner one involving self-representations, aspirations,

competences. Career adjustment may thus depend on the specific relation that people (mostly unconsciously) establish with their own career as symbolic object: both internal, in terms of productive competence as self-perception to be able to create something good; and external, in terms of productive objective as capability to achieve effective goals, negotiate with others and maintain good work relationships. In other words, we could say that *career adjustment stems from the feeling of holding a productive competence and of realizing productive objectives*.

To enable the evaluation of this model, we developed the Dynamic Career Scale (DCS) and conducted two studies in the Italian context based on different Italian samples - adult working participants (study 1) and newly-qualified psychologists enrolled in a career research program (study 2) – which overall consented to evaluate evidence concerning internal structure and convergent evidence of validity, as well as internal consistency and test-retest reliability.

The study 1 was specifically used to test the following hypotheses:

- *Hypothesis 1.* The DCS dimensions correlate with job satisfaction and professional development.
- *Hypothesis 2.* The DCS dimensions succeed in explaining career adaptability.
- *Hypothesis 3.* The DCS dimensions succeed in explaining work self-efficacy.

The study 2 was used to test the following hypotheses:

- *Hypothesis 4.* The DCS dimensions correlate with previous academic and future career success.
- *Hypothesis 5.* The DCS dimensions succeed in explaining career adaptability.
- *Hypothesis 6.* The DCS dimensions succeed in explaining search for work self-efficacy.

1.3 Method

1.3.1 Development of the Dynamic Career Scale (DCS)

Some test stimuli were created in order to develop an instrument aimed at assessing the four dimensions on which our psychodynamic conceptualization of career adjustment is grounded. Two major aspects were considered in the stimuli creation: a) stimuli should focus on career and job-related situations; b) these situations should predispose to potential reparative activities.

With regard to the first pinpoint, four sentences were developed which covered the most common job situations potentially occurring along the course of career development and worklife, which respectively refer to: 1) job search and establishment, 2) job assessment and feedback, 3) job achievement and success, and 4) job advancement and promotion. The texts of sentences were stated so to be suitable for both freelance professionals and employees.

In relation to the second point, sentences referred to some job situations where career - as a symbolic good object – was presented as lost or damaged. Therefore, these situations dealt with failures in the realization of career and work goals, in order to assess the potential restoration in phantasy of both the external object (i.e. productive objective, as capability to achieve effective goals, negotiate with others and maintain good work relationships) and the internal one (i.e. productive competence, as self-perception to be able to create something good).

The frustrating nature of the test stimuli allowed the respondents to better express their modes of functioning in facing the proposed challenges which, consistently with our psychodynamic framework, mostly pertain to constellations of anxieties, defenses and object relations. To this aim, the test instructions presented these situations as "common" and asked respondents to indicate their "thoughts" in order to reduce potential social desirability responding. To strengthen the good nature of the object as something desirable and meaningful, the texts of sentences included a statement about the subject's effort to achieve these career goals, thus expressing care and concern for the object. The sentences were as follows: 1) A job interview has not gone well despite believing you have performed well; 2) Your work is judged negatively despite believing you have done well; 3) You have not accomplished an assigned job despite believing you have worked hard and 4) The job improvement you expected has not come despite believing you have worked hard.

Then, for each sentence, some items were developed in order to assess the above mentioned dimensions, i.e. true reparation, manic reparation, mania and envy, as different modes of functioning in facing career failures and challenges. For the operational definition of the constructs, three criteria were used regarding the symbolic relationship with the object (both external and internal) able to

differentiate the constructs: a) recognition of the damage to a loved good object; b) prevalent feelings characterizing *ego*'s response; c) potential reparation of the object (see Table 1.1).

Table 1.1. *Criteria for the operational definition of the DCS dimensions*

	Recognition of the damage to a loved good object	Prevalent feelings characterizing ego's response	Potential reparation of the object
True reparation	Both internal and external	Depressive	Both internal and external
Manic reparation	Only external	Grandiose/narcissistic	Only external
Mania	None	Manic	None (dismissing)
Envy	Only external	Manic	None (destruction)

True reparation can be defined as a way to realize productive objectives by relying on one's own capabilities and efforts and thus to effectively remedy to career failures. It is based on: a) acknowledgement that both productive objective and productive competence have been damaged; b) depressive-like feelings such as sorrow, regret, sense of inadequacy; and c) effort to restore productive objective by relying on productive competence.

Manic reparation can be defined as a way to realize productive objectives without relying on one's own capabilities and efforts and thus to magically solve career failures. It is based on: a) acknowledgement that only productive objective has been damaged; b) narcissistic and grandiose feelings dealing with overvalued self-perception and sense of omnipotence; and c) immediate restoration of productive objective without relying on productive competence.

Mania can be defined as a way to escape the realization of productive objectives by denying their relevance, without enacting capabilities and efforts to face career failures. It is based on: a) lack of acknowledgement that productive competence and productive objective have been damaged; b) manic feelings such as control, triumph or contempt; and c) lack of restoration of productive objective which is instead dismissed in order to deny the dependence on it.

Envy can be defined as a way to sabotage the realization of productive objectives by desiring others' misfortune, without enacting capabilities and efforts to face career failures. It is based on: a) acknowledgement that only productive objective has been damaged; b) manic feelings such as control,

triumph or contempt; and c) lack of restoration of productive objective which is symbolically destroyed by wishing misfortune of others.

Four items per sentence (one for each of the four dimension) were developed thus resulting in an initial set of 16 items. Items scored on a 7-point Likert-type scale, ranging from 1 (Not at all) to 7 (Completely), indicating to what extent some thoughts could come to mind in facing the career situations presented in the sentences.

1.3.2 Content validity

After the initial process of item development was completed, a team of experts assessed the content validity which is the extent to which the instrument covers the different aspects of the construct that it is supposed to measure. Three psychologists with a clinical and psychodynamic background were asked to rate the appropriateness of each item based on the three criteria we above mentioned about the operational definition of the constructs. Each item was given four different ratings, respectively regarding relevance, clarity, simplicity, and ambiguity, by a 4-point scale (from 1 = not relevant/clear/simple or doubtful to 4 = very relevant/clear/simple or meaning is clear). Item Content Validity Index was computed as the percentage of experts that approved the item and gave it a score of 3 or 4. For each sentence only the items that scored over 0.75 for each criterion were retained (Martuza, 1977), while the rest were restated and newly rated through an iterative process. Therefore, the final version of DCS included 4 items per sentence, respectively regarding the four assessed dimensions (true reparation, manic reparation, mania, envy), overall resulting in a 16-item scale.

1.3.3 Face validity

To test face validity and comprehensibility of the instrument, DCS was pre-tested through participation by 20 adult working participants. They evaluated DCS items for readability, comprehensibility, sentence length, and clarity of meaning to ready the instrument for implementation. Face validity was assessed by a 4-point Likert scale (from 1= very unreadable, incomprehensible, inappropriate in sentence length, unclear in meaning to 4= very readable, comprehensible, appropriate in sentence length, clear in meaning), considering a score of 3 as appropriate. After pre-testing, no changes to the items of the DCS were required.

1.3.4 Study 1

1.3.4.1 Participants and procedure

A Web-based survey was promoted by a snowball sampling procedure for the initial validation of the DCS subscale scores in an Italian working population. The study was conducted according to the online survey design, development and implementation guidelines suggested by Andrews, Nonnecke and Preece (2003). A convenience sample of 260 working participants was recruited (157 women and 103 men) whose mean age was 39.85 (SD = 10.99). The survey included socio-demographic and job information, career development-related variables and work self-efficacy, job satisfaction and career adaptability measures. Fifty-two participants out of the total sample were randomly chosen and requested by e-mail to fill out the questionnaire again after one month. Participants gave their informed consent. The study received the research ethics committee approval.

1.3.4.2 Measures

Emotional responses. After the completion of DCS, participants were requested to indicate to what extent they felt desire to remedy, contempt and willingness to engage in facing the job situations proposed across the DCS by using a 7-point Likert scale (from 1= "not at all" to 7= "Completely"). These three different responses were conceived as indirectly informing about emotional patterns evoked by stimuli, in terms of affective modes of making sense to one's own experience of career failures and challenges. These affective modes were based on the main criteria able to differentiate the constructs in terms of symbolic relationship with the object, described as follows:

1) *desire to remedy* indicates the genuine concern for the object and the recognition of damage and loss which is characteristic of true reparation; b) *contempt* allows to grasp manic feelings aimed at denying the dependence on and the value of the object, which characterize mania and envy; c) *willingness to engage* refers to the potential attempt to restore the object, differentiating true and manic reparation from mania. For what concerns envy, despite no reparation is performed, the relationship with the object is not dismissed but there is a particular form of engagement aimed at destroying the object.

Career adaptability. The career adaptability scale (CAAS) (Savickas & Porfeli, 2012) measures career adaptability consisting in four subscales referring to different capacities: *concern* involves preparing

for and developing an optimist attitude towards the future; *control* implicates taking responsibility and exerting influence over the future; *curiosity* entails the exploration of future career opportunities and scenarios; finally, *confidence* refers to beliefs about one's abilities to overcome obstacles and achieve goals. Data on reliability and validity of both total and subscale scores are provided in the study by Savickas and Porfeli (2012). In the present study Cronbach's alpha for the total score of career adaptability was .94 and for the four subscales was .89 (Concern), .79 (Control), .84 (Curiosity) and .85 (Confidence), respectively.

Work self-efficacy scale. The work self-efficacy scale (WSES) (Pepe, Farnese, Avallone, & Vecchione, 2010) is a 10-item scale assessing perceptions about specific work domains with a five-point Likert scale (from 1 – "not at all capable" to 5 – "completely capable"). It is composed of two subscales: *relational willingness* refers to a predisposition towards or attention to relationships with colleagues and superiors; while *commitment* refers to perceptions of being capable of achieving fixed objectives and being significantly committed at work. Data on reliability and validity of both total and subscale scores are provided in the study by Pepe et al. (2010). In the present study Cronbach's alpha for the two subscales was, respectively, .84 and .82 (.87 for the whole *WSES*).

Job satisfaction. An ad hoc scale of 5 items was used to assess the respondents' satisfaction with their work environment with specific regard to five main aspects: work context, colleagues, managers/supervisors, clients and external market. This easy-to-use measure was developed to grasp a synthetic impression of the subjective experience of job satisfaction. Indeed the existing validated measures tend to have a large number of items regarding several dimensions of the construct based on specific theoretical frameworks, which was out of scope for this contribution. Cronbach's alpha for this scale was .73. The first component extracted by principal component analysis explained for 49.10% of the overall variance.

*Career development***.** Three "objective" dichotomous indicators were used which referred to the presence of voluntary training, new job assignments and economic benefits/increased revenue during the previous 12 months. Indeed, participation in training and development activities, advancement opportunities, and salary increase can be assumed as identifying a dynamic career path and an ongoing

process of managing one's professional life (Ng & Feldman, 2014). These indicators were summed to provide an overall composite score ranging from 0 to 3.

1.3.4.3 Statistical analyses

Distributional properties of the DCS were inspected to examine the normality of the total scores. An exploratory factor analysis (EFA) - with maximum likelihood extraction method and direct oblimin rotation - was then performed in order to establish and confirm the factor structure of the scale. The sample size was considered acceptable because one common rule of thumb is to ensure a person-to-item ratio of 10:1. Each item was included in a specific factor if there was a minimal factor loading of .3, while to determine how many factors should be retained two main criteria were used (Fabrigar, Wegener, MacCallum, & Strahan, 1999): the Kaiser criterion and parallel analysis. To assess the reliability of test scores, internal consistency of the different dimensions of DCS was measured by Cronbach's alpha and test-retest reliability after one month was assessed by Pearson's correlations. Four multiple regression analyses were performed to investigate the contribution of the rated emotional responses (as predictors) in explaining the score of each DCS subscale. Correlations between the DCS subscales and two career outcomes, i.e. job satisfaction and career development, were examined by Pearson's r (Hypothesis 1). Then, for testing the Hypotheses 2 and 3 multiple regression analyses were performed using the four DCS subscales as predictors and career adaptability and work self-efficacy measures as dependent variables, respectively.

1.3.4.4 Results and discussion

Table 1.2 shows descriptive statistics. No missing data were present. Based on these results, it could be concluded that normality assumptions were tenable because values for skewness and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution (George & Mallery, 2010).

Table 1.2. *Distributional indexes of the items*

Item	Mean	SD	SE	Skew.	Kurt.
It was not worth the while. The offer was not really interesting anyway (M 1)	2.85	1.25	0.08	0.14	-0.40
I'd rather do a bad job if I have to deal with such people (M 2)	2.21	1.39	0.09	1.12	0.71

I'd rather not have assignments if I must carry on useless work (M 3)	2.88	1.64	0.10	0.67	-0.26
Never mind. I wouldn't have benefitted economically anyway (M 4)	2.62	1.35	0.08	0.58	0.04
Never mind. I don't think anybody else would've done better (E 1)	2.66	1.50	0.09	0.68	-0.09
It is not the end of the world. I don't think anybody else would be able to do better (E 2)	2.57	1.47	0.09	0.86	0.46
I knew it. No one would be able to do a better job anyway (E 3)	2.39	1.35	0.08	1.01	1.03
I wouldn't cry about it. I don't believe that others would have better luck (E 4)	2.68	1.41	0.09	0.61	-0.08
I'm the most qualified person for that work and I will prove my talent (MR 1)	4.34	1.54	0.10	-0.30	-0.46
I'm sure about my capabilities. I will show the quality of my work (MR 2)	5.11	1.16	0.07	-0.41	0.43
I know my true value. I will get other assignments (MR 3)	4.45	1.39	0.09	-0.34	-0.18
I know I am talented and I will achieve what I want (MR 4)	4.85	1.27	0.08	-0.27	-0.15
I'm sorry. I will try to work on my shortcomings to improve myself (TR 1)	4.90	1.22	0.08	-0.84	1.25
I'm sorry. I will work harder to overcome my shortcomings (TR 2)	4.88	1.27	0.08	-0.90	1.32
I need to understand what I did wrong if I want to improve (TR 3)	5.47	1.22	0.08	-1.00	1.99
I have to try harder to deserve it in the future (TR 4)	4.63	1.39	0.09	-0.61	0.28

Note: SD = standard deviation; *SE* = standard error; *M* = Mania; *E* = Envy; *MR* = Manic Reparation; *TR* = True Reparation. Items were translated into English only for the purpose of the present study.

An EFA was used to test the dimensionality of the scale from which four factors with eigenvalue greater than 1.0 were extracted accounting for 58.33% of the variance of the original items. Parallel analysis confirmed that four factors should be retained because their eigenvalues from our actual data set exceeded the 95th percentile of eigenvalues derived from random data sets. Eigenvalues were respectively equal to 3.52 (3.06, CI = 2.58, 3.54), 2.87 (2.80, CI = 2.40, 3.21), 1.88 (1.85, CI = 1.53, 2.17) and 1.07 (1.06, CI = .78, 1.34). The results of this EFA were then rotated. The KMO of .78 verified the sampling adequacy for the EFA and Bartlett's test of sphericity confirmed the suitability of data for factor analysis, $\chi^2(120)=1167.88$, $p<.001$. Anti-image correlation values for individual items were all >.70 which is above the acceptable limit of .50 (Field, 2013). As shown in Table 1.3, overall factor loadings were satisfactory as well as communalities, with the exception of the item 1 of the Mania subscale which did not reach the minimal factor loading required (equal to .3). However, we decided not to eliminate it and to retain it on the fourth factor where it showed the highest loading, consistently with our theoretical model.

Table 1.1. *Loading for Exploratory Factor Analysis*

	Factor				
Item	*1*	*2*	*3*	*4*	*CM*
Never mind. I don't think anybody else would've done better (E 1)	**0.47**	0.07	0.04	0.16	*0.33*
It is not the end of the world. I don't think anybody else would be able to do better (E 2)	**0.89**	0.05	-0.03	-0.23	*0.66*
I knew it. No one would be able to do a better job anyway (E 3)	**0.70**	0.02	-0.01	0.10	*0.57*
I wouldn't cry about it. I don't believe that others would have better luck (E 4)	**0.55**	-0.05	-0.02	0.18	*0.44*
It was not worth the while. The offer was not really interesting anyway (M 1)	0.18	0.01	-0.01	0.28	*0.16*
I'd rather do a bad job if I have to deal with such people (M 2)	0.22	-0.22	-0.11	**0.31**	*0.30*
I'd rather not have assignments if I must carry on useless work (M 3)	0.02	0.06	-0.10	**0.45**	*0.24*
Never mind. I wouldn't have benefitted economically anyway (M 4)	0.08	0.02	0.08	**0.77**	*0.63*
I'm the most qualified person for that work and I will prove my talent (MR 1)	0.18	**0.64**	-0.01	-0.08	*0.47*
I'm sure about my capabilities. I will show the quality of my work (MR 2)	-0.02	**0.72**	0.07	-0.04	*0.55*
I know my true value. I will get other assignments (MR 3)	0.05	**0.64**	0.03	0.11	*0.44*
I know I am talented and I will achieve what I want (MR 4)	-0.11	**0.83**	-0.07	0.06	*0.65*
I'm sorry. I will try to work on my shortcomings to improve myself (TR 1)	0.07	0.01	**0.70**	-0.04	*0.50*
I'm sorry. I will work harder to overcome my shortcomings (TR 2)	0.03	-0.07	**0.80**	0.01	*0.61*
I need to understand what I did wrong if I want to improve (TR 3)	-0.07	0.09	**0.52**	-0.09	*0.34*
I have to try harder to deserve it in the future (TR 4)	-0.03	-0.01	**0.65**	0.09	*0.41*
Eigenvalue	3.52	2.87	1.88	1.07	
Variance explained	21.99	17.91	11.73	6.70	

Inter-Factor Correlation

Factor	1	2	3	4
1	-			
2	.129	-		
3	-.181	.177	-	
4	.502	-.056	-.228	-

Note: M = Mania; *E* = Envy; *MR* = Manic Reparation; *TR* = True Reparation. Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization. Factor loadings ≥ 0.30 are in bold. Items were translated into English only for the purpose of the present study.

With regard to the reliability of the DCS subscales, Cronbach's alpha correlation coefficients were .60 (Mania), .76 (Envy), .79 (Manic reparation) and .76 (True reparation), while test-retest correlations after one month were equal to .63, .78, .68 and .66, respectively.

Consistently with our theoretical framework, the results of regression analyses (Table 1.4) showed that true reparation is characterized by high desire to remedy (β = .45, p<.001), low contempt (β = -.16, p<.01) and high willingness to engage (β = .29, p<.001). Yet, manic reparation was explained by high willingness to engage (β = .30, p<.001) and low desire to remedy (β = -.16, p<.05), thus indicating that the attempt to restore the object is not based on the genuine recognition of loss and damage. Both mania and envy were characterized by contempt revealing manic feelings (respectively, β = .34, p<.001; β = .24, p<.001); while mania was also explained by low willingness to engage (β = -.17, p<.01) as a way to successfully escape from the investment on the object and avoid reparation, this is not the case of envy where contempt probably is not sufficient to definitively deny the desire of and the dependence on the object itself, highlighting an unresolved dynamics.

Table 1.4. *Summary of multiple regression analyses (standardized coefficients)*

	Mania	Envy	Manic reparation	True reparation
Constant	*12.09****	*10.79****	*13.87****	*8.97****
Desire to remedy	-0.00	-0.04	-0.16*	0.45***
Contempt	0.34***	0.24***	-0.05	-0.16**
Willingness to engage	-0.17**	-0.07	0.30***	0.29***

Note: * p< 0.05; ** p < 0.01; *** p < 0.001

With regard to career outcomes (Table 1.5), some statistically significant - albeit low - correlations emerged. Manic and true reparation were associated with higher job satisfaction (respectively, r = .156, p<.05; r = .182, p<.01), while mania and envy were associated with lower career development (respectively, r = -.136, p<.05; r = -.140, p<.01). Consistently with our theoretical framework, making (both true and manic) reparation seems to be associated with more pleasant feelings at work because it may alleviates guilt feelings and preserve the hope to succeed. Conversely, mania and envy are shown

to be dismissing and self-handicapping modes of functioning which negatively affect career development.

Table 1.5. *Correlations between DCS subscales and career outcomes (Pearson's R)*

	Mania	Envy	Manic reparation	True reparation
Job satisfaction	-0.080	-0.063	0.156*	0.182**
Career development	-0.136*	-0.140*	0.058	0.065

Note: * $p < 0.05$; ** $p < 0.01$ (two-tailed)

With regard to the Hypothesis 2 (Table 1.6), multiple regression analyses showed that overall DCS succeeded in explaining for about 29% of the career adaptability total score (R^2=.30, F(4,252)=26.73, p<.001), with manic (β = .52, p<.001) and true reparation (β = .12, p<.05) as predictors of higher career adaptability. Considering the different dimensions of career adaptability, results revealed that while manic reparation contributed to increase all of them (concern, β = .46, p<.001; control, β = .45, p<.001; curiosity, β = .41, p<.001; confidence, β = .45, p<.001), true reparation had an effect only on concern (β = .15, p<.01) and curiosity (β = .12, p<.05). This result is not surprising: indeed, while manic reparation is often associated with ambitious assertiveness and unrealistic confidence; true reparation does not necessarily involve beliefs of high control and effectiveness because it is driven by a mood of sadness and realism. However, no effect was detected with regard to mania and envy. Similar conclusions resulted from testing the predictive value of DCS subscales on work self-efficacy with regard to the Hypothesis 3 (Table 1.7). About 19% of the work self-efficacy variance was explained by the model (R^2=.20, F(4,252)=15.97, p<.001), with manic reparation impacting on both the WSES total score (β = .40, p<.001), and the two related subscales (relational willingness, β = .32, p<.001; commitment, β = .39, p<.001) and with true reparation impacting on the WSES total score (β = .12, p<.05) and the relational willingness subscale (β = .14, p<.05). Therefore, differently from manic reparation, true reparation seems to imply the perceived capability to work with others, but not necessarily to successfully achieve goals because personal commitment may be regarded as something needing to be further improved.

Table 1.6. *Summary of multiple regression analyses for predicting career adaptability by DCS subscales (standardized coefficients)*

	Career adaptability	Concern	Control	Curiosity	Confidence
Constant	54.35***	8.62***	16.05***	13.28***	16.40***
Mania	-0.02	0.02	-0.05	-0.01	-0.05
Envy	-0.11	-0.12	-0.07	-0.06	-0.11
Manic reparation	0.52***	0.46***	0.45***	0.41***	0.45***
True reparation	0.12*	0.15**	0.03	0.12*	0.08
R	0.55	0.50	0.46	0.44	0.48
R^2(Adjusted)	0.29***	0.24***	0.20***	0.18***	0.22***

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 1.7. *Summary of multiple regression analyses for predicting work self-efficacy by DCS subscales (standardized coefficients)*

	Work self-efficacy	Relational willingness	Commitment
Constant	28.22***	14.08***	14.13***
Mania	-0.06	-0.08	-0.02
Envy	-0.09	-0.11	-0.05
Manic reparation	0.40***	0.32***	0.39***
True reparation	0.12*	0.14*	0.06
R	0.45	0.41	0.40
R^2(Adjusted)	0.19***	0.15***	0.15***

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Overall, based on the standardized regression coefficients, manic reparation can be considered as the best predictor of both career adaptability and work self-efficacy; however, this could depend on the inflated estimation of one's abilities characterizing manic reparation.

1.3.5 Study 2

1.3.5.1 Participants and procedure

An Italian sample of 196 psychologists voluntarily enrolled in a career research program promoted by the Italian Psychologist Certification Board to newly registered professionals. The sample was mainly

composed of women (86.2%) and on average was aged 31.31(SD = 5.27); 54.6% of them was employed. An online questionnaire was administered, which included socio-demographic, academic and job information, search for work self-efficacy and career adaptability measures. Four months after the questionnaire completion, seventy participants (78.6% women; 70% employed) out of the total sample were requested to report their occupational status: three participants (4.3%) had lost their previous job and were unemployed, while fifteen participants (21.4%) had found a job. Participants gave their informed consent. The study received the research ethics committee approval.

1.3.5.2 Measures

Academic and employment information. Respondents were requested to indicate some information regarding their academic and employment situation. For the purpose of the present study, two data were considered particularly relevant in terms of convergent evidence of validity of the DCS: the final grade of university degree (normally ranging from 66 to 110 cum laude) as indicator of academic success, and occupational status (dychotomous variable: employed or unemployed) as indicator of career success.

Career adaptability. The same tool described in sudy 1 was used for study 2 (CAAS) (Savickas & Porfeli, 2012). In the present study Cronbach's alpha for the total score of career adaptability was .93 and for the four subscales was .83 (Concern), .84 (Control), .85 (Curiosity) and .90 (Confidence), respectively.

Search for work self-efficacy. The search for work self-efficacy (SWSES) is a 12-item scale (Pepe, Farnese, Avallone, & Vecchione, 2010), assessing perceived capabilities to cope with different situations in the search for a job (or for a new job, for those who are already employed) by using a five-point Likert scale (from 1 – "not well at all" to 5 – "very well"). It measures four dimensions composed of three items each: *frustration coping* refers to managing difficult moments while searching for a job; *enterprising exploration* refers to actively committing oneself to searching for a job; *proactive career-planning* refers to actively planning one's own professional future and *relational integration* refers to acquiring and maintaining functional relationships in work settings. Data on reliability and validity of both total and subscale scores are provided in the study by Pepe et al. (2010). In the present study

Cronbach's alpha coefficients for the four dimensions were .78 (frustration coping), .82 (enterprising exploration), .87 (proactive career-planning) and .77 (relational integration), respectively. Cronbach's alpha for the whole SWSES was .86.

1.3.5.3 Statistical Analyses

Confirmatory Factor Analysis (CFA) was applied to this sample in order to confirm the factor structures of the 16-item DCS found in the Study 1, testing a four-factor model where each construct was specified as a latent variable indicated by its respective items. The maximum likelihood (ML) method was used and factors were allowed to correlate. The sample size was ensured based on a person-to-item ratio of 10:1. Different components of fit were evaluated (Hu & Bentler, 1995) including the χ^2 ratio (χ^2/degrees of freedom [*df*]), the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean square Residual (SRMR), the Confirmatory Fit Index (CFI) and the Tucker–Lewis Index (TLI). To assess the reliability of test scores, internal consistency of the different dimensions of DCS was measured by Cronbach's alpha. With regard to academic and career success (Hypothesis 4), Pearson's correlations were tested between the DCS subscales and the final grade of university degree. A logistic regression was performed to ascertain the effects of the DCS dimensions on the likelihood that participants would have found a job four months later the first test completion. The analysis was run in two steps: occupational status as dichotomous variable was entered in the first step as control variable, while the scores of the DCS scales were entered in the second one. Then, for testing the Hypotheses 5 and 6 multiple regression analyses were performed using the four DCS subscales as predictors and career adaptability and search for work self-efficacy measures as dependent variables, respectively.

1.3.5.4 Results and discussion

The results of CFA indicated an adequate fit of the four-factor model of DCS (χ^2 =160.422; *df* = 98; χ^2/df = 1.637; CFI = .940; TLI = .926; RMSEA = .057 [90% CI: .041, .073]; SRMR = .054). All the factor loading estimates were statistically significant (p<.001) and Mania, Envy, Manic reparation and True reparation items loaded solely and respectively on Mania, Envy, Manic reparation and True reparation (lowest loading value: 0.61, highest loading value: 0.82). With regard to inter-

factor correlations, consistently with our theoretical framework, true reparation was negatively correlated with mania (r = -.25, p<.01) .and envy (r = -.35, p<.001) while no correlation was detected between true and manic reparation because (r = .16, p>.05), despite they show similarities and can coexist, they refer to qualitatively different and independent constructs. Conversely, manic reparation correlated with mania (r = .38, p<.001) and envy (r = .34, p<.001); whereas, a very high correlation was detected between envy and mania (r = .90, p<.001). In this regard, we performed a comparison of the goodness-of-fit indexes between the four-factor model previously discussed and a three-factor model, including true reparation, manic reparation and a third latent variable indicated by the items of both mania and envy. However, according to what suggested by Schumacker and Lomax (2010), the results did not show a better fit of the three-factor solution because it was characterized by higher values of χ^2 (172.435, df=101) vs. 160.422, df=98) and Akaike Information Criterion (AIC) (9,481.128 vs. 9,475.115), lower CFI (.931 vs. .940) and TLI (.918 vs. .926), and generally slightly worse values of SRMR (.057 vs. .054) and RMSEA (.060 vs. .057). In addition, Chi-Square Difference Tests (Yuan & Bentler, 2004) to compare the two competing models shows that the four-factor model (with more parameters) explains the data better, χ^2 (3) = 11.993, p<.01. Therefore, the four-factor solution was considered as more apt to fit the data well and to differentiate the constructs of mania and envy, coherently with the reference theoretical framework. With regard to the reliability of the DCS subscales, Cronbach's alpha coefficients were .75 (Mania), .83 (Envy), .76 (Manic reparation) and .76 (True reparation). The results concerning the convergent evidence of validity of DCS based on academic success showed a statistically significant - despite low - correlation between the final grade of university degree and true reparation (r = .214, p<.01), while no association was detected with mania (r = .006, p = .928), envy (r = -.032, p = .657) and manic reparation (r = .007, p = .927). With regard to the contribution of the DCS in predicting the change of occupational status four months later (Table 1.8), the results revealed that the logistic regression model including the four DCS subscales was statistically significant, $\chi^2(4)=13.74$, p < .01. The model explained 19.3% (Nagelkerke R^2, excluding the contribution of the previous occupational status as control variable) of the variance in employability and correctly classified 82.9% of cases. In detail, increasing true reparation was associated with an

increased likelihood to find a job four months later. Therefore, true reparation seems to be a useful and valuable construct to differentiate respondents in terms of their previous academic success and to predict their future employability. In this sense, we could hypothesize that true reparation deals with the actual persistence and effort to make good performances, differently from manic reparation whose potence may be inflated and not supported by outcome-based evidence in the long run.

Table 1.8. *Summary of logistic regression analysis for predicting employability four months later by DCS dimensions, controlling for previous occupational status*

	B	SE *B*	Exp(*B*)
Mania	-0.23	0.15	0.80
Envy	0.02	0.13	1.02
Manic reparation	-0.06	0.09	0.94
True reparation	0.24	0.11	1.27*
Constant	*-2.71*		

Note: Occupational status (dychotomous variable) was entered as control on step 1 (omitted from the table); * p<0.05

With regard to the Hypothesis 5 (Table 1.9), multiple regression analyses showed that overall DCS succeeds in explaining for about 18% of the career adaptability total score (R^2 = .20, F(4,191) = 11.79, p<.001), with manic reparation as predictor of higher career adaptability (β = .43, p<.001). Considering the different dimensions of career adaptability, results reveal that manic reparation contributes to increase all of them (concern, β = .35, p<.001; control, β = .29, p<.001; curiosity, β = .35, p<.001; confidence, β = .43, p<.001), while envy is associated with lower concern (β = -.19, p<.05) and confidence (β = -.21, p<.05). This suggests that manic reparation may overall have an adaptive function in facing the work challenges; whereas envy relates to a general pessimistic attitude towards the future and to a lower perceived competence to effectively achieve goals, thus leading to malfunctioning.

For what concerns the Hypothesis 6 (Table 1.10), about 12% of the search for work self-efficacy variance is explained by the model (R^2 = .14, F(4,191) = 7.56, p<.001), overall highlighting a positive contribution of manic reparation (β = .30, p<.001) and a negative effect of mania (β = -.22, p<.05). The examination of each SWSES subscale shows that manic reparation positively correlates with all the subscale (frustration coping, β = .29, p<.001; enterprising exploration, β = .20, p<.01; proactive career

planning, β = .30, p<.001), with the exception of relational integration at work which is affected by true reparation (β = .26, p<.001). Mania is associated with lower frustration coping (β = -.32, p<.01) and relational integration coping (β = -.19, p<.01). In sum, we could conclude that manic reparation may strengthen the perceived capabilities to face difficulties, explore job opportunities and define a career plan; differently from true reparation, which seems mainly to deal with the relational competences required to approach to the labor market. Mania is intertwined with scarce tolerance to frustration while searching for a job and may represent a way to escape from potential failures and to dismiss work relationships.

Table 1.9. *Summary of multiple regression analyses for predicting career adaptability by DCS subscales (standardized coefficients)*

	Career adaptability	Concern	Control	Curiosity	Confidence
Constant	73.14***	16.20***	17.06***	20.77***	19.11***
Mania	-0.06	0.05	-0.10	-0.12	-0.05
Envy	-0.17	-0.19*	-0.03	-0.11	-0.21*
Manic reparation	0.43***	0.35***	0.29***	0.35***	0.43***
True reparation	0.08	0.09	0.14	-0.01	0.04
R	-0.44	0.38	0.34	0.34	0.44
R^2(Adjusted)	0.18***	0.13***	0.10***	0.10***	0.18***

Note: * p< 0.05; ** p < 0.01; *** p < 0.001

Table 1.10. *Summary of multiple regression analyses for predicting search for work self-efficacy by DCS subscales (standardized coefficients)*

	Search for work self-efficacy	Frustration coping	Enterprising exploration	Proactive career planning	Relational integration
Constant	36.19***	7.88***	9.82***	8.62***	9.85***
Mania	-0.22*	-0.32**	-0.13	-0.07	-0.19*
Envy	-0.08	0.11	-0.15	-0.11	-0.04
Manic reparation	0.30***	0.29***	0.20**	0.30***	0.10
True reparation	0.07	0.06	0.05	-0.11	0.26***

R	0.37	0.35	0.29	0.29	0.38
R^2(Adjusted)	0.12***	0.11***	0.07***	0.06***	0.12***

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

1.4 General discussion

The general aim of the present paper was to propose a psychodynamic conceptualization of career adjustment grounded on Klein's object relations theory and to provide a rigorous empirical evaluation of its potential validity. For this purpose, the Dynamic Career Scale (DCS) was developed and validated for the measurement of four main constructs, i.e. mania, envy, manic reparation and true reparation, which may be relevant in the field of career and work psychology. DCS consisted in an initial set of items dealing with career failures potentially occurring in four common job situations which characterize the course of career development and worklife, i.e. job search and establishment, job assessment and feedback, job achievement and success, and job advancement and promotion. Items were developed in order to assess the above mentioned dimensions as different modes of functioning in facing career failures and challenges. In detail, mania and envy refer to two different modes of avoiding potential efforts to face career failures, by dismissing career goals and denying their relevance (mania) or by sabotaging them and desiring others' misfortune (envy), respectively. Conversely, manic and true reparation represent two different modes of remedying to career failures and realizing career goals, by relying on omnipotent restoration and magical solutions (manic reparation) or by improving one's capabilities and efforts (true reparation), respectively. The DCS items were stated so to be suitable for both freelance professionals and employees and scored on a 7-point Likert-type scale - ranging from 1 (Not at all) to 7 (Completely) - indicating to what extent some thoughts could come to mind in facing the career situations presented. After completing the process of content and face validity, the final version of the DCS resulted in a 16-item scale (four items for each dimension).

Two studies were then conducted which contributed to test the construct validity by both exploratory (study 1) and confirmatory factor analysis (study 2) and to examine the reliability of the DCS, in terms of both internal consistency (study 1 and study 2) and test-retest reliability (study 1). Overall, the results confirmed a four-factor solution explaining 58.33% of the variance of the original items and

showed good psychometric properties of the DCS, with acceptable internal consistency (Cronbach's alpha ≥ .70) - with the exception of Mania in study 1 whose reliability of .60 can be questionable - and overall fair test-retest reliability estimates after one month of all the four subscales (with correlations ranging from .63 to .78). DCS subscales correlated each other consistently with the reference theoretical framework: true reparation was negatively associated with mania and envy, while no correlation was detected between true and manic reparation because, despite they show similarities and can coexist, they refer to qualitatively different and independent constructs. Instead, manic reparation, mania and envy correlated each other; in particular, a very high correlation was detected between envy and mania, probably because of the presence of manic feelings as common underlying route. In this regard, associations with participants' emotional responses to the DCS stimuli showed that mania and envy differed each other only based on the willingness to engage. This result could suggest the different function of manic feelings: in mania they seem to consent to remove investment from career goals thus reducing reparative efforts; while in envy probably they are not sufficient to definitively deny the desire to realize career goals, highlighting an unresolved dynamics with regard to potential reparation. True reparation was characterized by both low contempt and high desire to remedy and willingness to engage, thus expressing a genuine concern for career, coherently with the theoretical framework. Differently, in manic reparation the willingness to engage was laced with low desire to remedy thus highlighting the lack of true concern and the scarce recognition of one's responsibility in career failures.

Specifically, study 1 was conducted on adult working participants (N = 260) and aimed at testing whether the DCS dimensions correlated with job satisfaction and professional development as career outcomes (Hypothesis 1) and succeeded in explaining career adaptability (Hypothesis 2) and work self-efficacy (Hypothesis 3) as other measures relevant for career theories. With regard to career outcomes, manic and true reparation were associated with higher job satisfaction in line with the literature. Indeed, true reparation could trigger positive emotions - such as gratitude - which are demonstrated to play a positive role at workplace (Andries, 2011; Brief & Weiss, 2002) affecting both current job satisfaction and expectation of future satisfaction (Buote, 2014). Manic reparation, despite its potentially being

considered as impractical and ineffective at work, can also serve as a way to alleviate guilt feelings and preserve the hope to repair (Kets de Vries, 2010), due to the widespread impact of emotional states on judgments by making mood-congruent thoughts more available (Kavanagh & Bower, 1985).

Instead, mania and envy were associated with lower career development. This confirms what suggested in previous studies, because mania is characterized by diminished capacity for reality testing which leads to malfunctioning at work (Kets de Vries, 2010; Krantz, 2001) and envy negatively affects individual career success (Menon & Thompson, 2010) due to counter-productive behaviors, such as turnover intentions (Vecchio, 1995), absenteism (Duffy & Shaw, 2000), emotional disengagement from concrete goals (Erdil & Müceldili, 2014) and use of self-handicapping strategies (Lange & Crusius, 2015).

With regard to other measures relevant for career theories, the DCS was found to be relevant to explain both career adaptability and work self-efficacy, with manic and true reparation as statistically significant predictors. Overall, manic reparation was associated with all the sub-dimensions of the two constructs and showed the highest effects, probably because it leads to unrealistic confidence which may fuel excessive behavioral involvement in ever-higher goals (Johnson, 2005; Kets de Vries, 2010). Conversely, true reparation was not associated with control and confidence (for career adaptability) and with commitment (for work self-efficacy). Notwithstanding, this result is not surprising: indeed, true reparation does not necessarily involve beliefs of high control, confidence and effectiveness to successfully achieve goals, because it is driven by a mood of sadness and realism where personal commitment is regarded as something needing to be further improved. From this perspective, true reparation might reflect a more realistic vein and what Lapierre (1989) defined as “relative potence”, which presupposes the ability to mourn afresh illusions of omnipotence, as well as to recognize and accept both one’s own limits and the external reality as it is.

Study 2 also made several key theoretical contributions. It was conducted on a sample of newly-qualified psychologists enrolled in a career research program (N=196) in order to examine the contribution of the DCS in the understanding of the factors affecting the entrance into the labor market. In particular, we tested whether the DCS dimensions correlated with previous academic and future

career success as career-related variables (Hypothesis 4) and succeeded in explaining career adaptability (Hypothesis 5) and search for work self-efficacy (Hypothesis 6) as other measures relevant for career theories. The results confirmed the meaningful role of true reparation which was associated – albeit to a small extent – with higher final grade of university degree as indicator of academic success. Increasing true reparation was associated with an increased likelihood to find a job four months later. In this sense, we could hypothesize that true reparation deals with the actual persistence and effort to make good performances, differently from manic reparation whose potence is not supported by outcome-based evidence in the long run. This is in line with what suggested by Krantz (2001), according to whom in the depressive position one can mobilize resources to confront inner and outer realities effectively and better learn from experience.

With regard to other measures relevant for career theories, the role of the DCS to explain both career adaptability and search for work self-efficacy was confirmed, with manic reparation as predictor of higher career adaptability and envy as associated with lower concern and confidence. This suggests that manic reparation may have an adaptive function in facing the work challenges; while envy is characterized by a pessimistic attitude towards the future and a lower perceived competence to effectively achieve goals, consistently with previous studies on the relationship between envy and career adaptability (Langher, Caputo, Nannini, & Sturiale, 2016). However, true reparation does not seem to have any role. Some potential explanations can be advocated to justify this result. At first, because the study 2 focused on newly-qualified professionals with poorer work experience, they might have experienced career failures to a lesser extent and thus might be less prone to make authentic reparation. Due to the uncertainty of the labor market which they are exposed to, they may not resort to true reparation as the main resource for adjustment but may mostly refer to manic reparation as defense strategy to face depressive feelings, taking refuge in a good internal object or in a good external object.

Then, for what concerns the search for work self-efficacy, manic reparation contributes to strengthen the perceived personal capabilities to face difficulties, explore job opportunities and define a career plan. Differently, true reparation seems mainly affects the relational competences required to approach to the labor market, such as requesting advice from those with more experience, working with new

team members, respecting others' competences. From this perspective, a different function of reparation could be hypothesized with manic reparation promoting higher individual orientation and true reparation improving the relational one. Mania is intertwined with scarce tolerance to frustration while searching for a job and may represent a way to escape from potential failures and to dismiss new work relationships, as a regressive functioning operating when the *ego* loses confidence in the power of its capacity to make reparation (Krantz, 2001).

1.4.1 Limitations

Some limitations should be acknowledged in order to put the results into perspective. First, the generalizability of our findings can be called into question due to the convenience nature of the samples used in the two studies and to the online administration which could have generated a self-selection bias. In addition, trans-cultural validity is almost limited because our sample was entirely composed by Italian respondents; therefore, cross-cultural validation studies should be conducted in the future. Another limitation refers to the potential role of further unobserved variables, which may interfere with the relationship among the examined constructs, such as locus of control, sense of inferiority and expectations for success or failure. The correlational nature of the studies does not allow the disentanglement of the complex patterns among the examined variables; in this regard, longitudinal research should be further developed to causally infer the impact of the DCS dimensions. Furthermore, the measures used to test convergent evidence of validity were – albeit in some instances related to objective indicators - self-reported, while further other-reported, behavioral or relational measures could better deepen the practical relevance of this piece of research in terms of actual career outcomes at workplace on the individual, relational and organizational level. Due to the wide variety of participants and to the lack of information about their different actual or potential work environments, some context-related effects could exist, as also suggested in a study by Bocciardi et al. (2017) about the key predictors of career adaptability. Indeed, because affective symbolizations – as unconscious affective processes and emotional expectations – were demonstrated to affect the relationship with work contexts (Langher, Brancadoro, D'Angeli, & Caputo, 2014), further context-related variables may be considered which have a role in this psychodynamic conceptualization of career adjustment.

1.4.2 Implications for practice

The studies presented herein suggest the relevant contribution of the psychodynamic conceptualization of career adjustment as consisting in mania, envy, manic and true reparation from Klein's object relations theory. These different modes of functioning in facing career failures and challenges can provide new insights about unconscious processes potentially affecting career decisions, strategies and adjustment, given the limits of the rational paradigm and its insufficient suitability for career practice (Krieshok, Black, & McKay, 2009; Yates, 2015). Indeed, this piece of research aims at overcoming the problems of conceptualization and measurement in the psychoanalytic tradition, which probably prevented the psychodynamic approach from having a substantive presence in current career development literature (Mcllveen, 2014) and from being commonly used in career guidance and career counseling (Lehman, Ribeiro, Uvaldo, & Da Silva, 2015). Therefore, this work may be beneficial to develop and assess career interventions grounded on a psychodynamic route, as well as to enrich the logical framework for the understanding of the patterns, effects and relations among the existing career-related psychological variables, from both a theoretical and a practical perspective. For instance, the most widespread measures in the field of career and work psychology – such as career adaptability and self-efficacy – may not be able to grasp emotional and relational dynamics and to distinguish the over-estimation of one's abilities from the genuine effort to develop one's career.

Overall, the findings suggest that mania and envy represent two dysfunctional modes of approaching to work situations which negatively affect one's own perceptions of career development and career outcomes. Thus, they should be taken into account in career interventions as potential clues of dismissing strategies and of scarce propensity to benefit from career guidance or counseling.

Reparation can be regarded as a psychological resource to be further promoted as it may be associated with a more realistic view about the self and the external reality and with higher actual effectiveness in achieving goals in the long run. It is worth noting that also manic reparation has an adaptive function and does not interfere with career outcomes, probably because it acts as a way to alleviate guilt feelings, increase confidence and preserve the hope to repair. As highlighted by our results, this is particularly meaningful while searching for a job and entering into the labor market, when a rupture in

the feeling of life continuity and integrity may occur - especially in times of extreme uncertainty and instability - and it is useful to strengthen the perception of personal abilities to cope with transitions (Langher, Caputo, Nannini, & Sturiale, 2016).

In conclusion, the results can provide training and career development professionals with the awareness that favoring true reparation could be a key-issue in program design for guidance and career interventions.

CHAPTER 2

A psychodynamic model for group career counseling:

The PICS (Psychodynamic Intervention for Career Strategies) program

The current literature in vocational and career fields strongly highlights the relevance of strategies to cope with the challenges of the labour market, in terms of flexibility, proactivity and adaptability (Del Corso, 2013; Savickas, 2012; Bocciardi, Caputo, Fregonese, Langher, & Sartori, 2017). As well, career-related adjustment processes are demonstrated to be biased by imagined and unconscious barriers which "may lead to procrastination in career decision-making or to making less than optimal career-decision" (Levin & Gati, 2015, p. 168). In this regard, the empirical evidence from decision theory, neuroscience and behavioral economics confirms the role of emotional and non-conscious processes in career-related issues (Krieshok, Black, & McKay, 2009; Yates, 2015), although classical and prevailing theories of career development are generally consistent with scientific reductionism (Bloch, 2005). Indeed, two main limitations of the rational paradigm can be advocated about its suitability for career practice (Yates, 2015): (a) decision-making tends to rely on gut instinct rather than on conscious logic in most situations; and (b) rational processing has been found to be less effective than heuristic based unconscious reason, especially in non-optimal decision making conditions and noisy, stressful and unforgiving environments. Consistently with the dual processing model proposed in neuroscience (Epstein, 1994; Kahneman, 2003; Lieberman, 2003), it would be more appropriate to consider both rational/conscious and intuitive/unconscious processes as mutually informing career decisions and strategies and, ultimately, career adjustment (Krieshok, Black, & McKay, 2009). Despite the limits of rationality and the abundance of non-conscious processes (Krieshok, Black, & McKay, 2009), the psychodynamic approach has no substantive presence in current career development literature (Mcllveen, 2014) and its use does not seem to be so common in career guidance and career counseling (Lehman, Ribeiro, Da Conceição, & Da Silva, 2015).

This seems to be confirmed by a recent review on career guidance and counselling by Bikos, Dykhouse, Boutin, Gowen and Rodney (2013) which, consistently with what reported by other authors (Hartung & Subich, 2011; Patton & McMahon, 2014), identified Person-Environment fit model, social-

cognition theory (SCT) and social-constructivism as the currently prevailing career theories. According to these theoretical models, career-related decision-making and planning are mainly influenced by personal interests, abilities and values (Person-Environment fit model; Holland, 1997), self-efficacy, beliefs and outcome expectations (Social-Cognition Theory; Lent, Brown, & Hackett, 1994) or autobiographical narratives about professional identity (Social Constructivism; Savickas, 2005). However, such models do not seem to adequately grasp the role of non-cognitive factors or non-rational processing and behaviors, because they mostly pertain to aspecific factors or personality-related traits, such as psychological well-being, anxiety or self-concept (Gati, Asulin-Peretz, & Fisher, 2012; Viola, Musso, Ingoglia, Lo Coco, & Inguglia, 2017). Therefore, as affirmed by Krieshok et al. (2009), "the representation of vocational introspection as a conscious and willful process remains the dominant paradigm" (p. 278).

2.1 Brief overview on psychodynamic approaches in vocational and career theories

Despite the contribution of psychodynamic theories to career research having been developed since the mid of the twentieth century, to date, they have received scarce recognition in career-related literature, probably due to their scarce reliance on work and economic issues and to the difficult problems related to operationalization in the psychoanalytic tradition (Silver & Spilerman, 1990; Walsh & Osipow, 1990). In this regard, Watkins and Savickas (1990) provided a review about the three main psychodynamic theories existing in vocational and career psychology: the psychoanalytic theory (Bordin, 1984; Osipow, 1983; Roe, 1964) mainly focused on unconscious needs, impulses and motivations; the Erickson's theory (1963, 1968) grounded on the concept of identity in career development process across the life span; and the Adlerian personality theory (Watkins, 1984) which highlighted the relevance of lifestyle, life tasks, family atmosphere and relationships, and early recollections in career and vocational behaviors. Overall, such psychodynamic approaches "make a significant contribution to the theories of life career development by adding the dimension of unconscious career choices" (Malach-Pines & Yafe-Yanai, 2001, p. 171). As well, they are mainly rooted in the Freudian theory, which was mainly based on the concept of work as a result of sublimation, by which unacceptable impulses and wishes could be channeled into socially acceptable

behaviors, thus allowing the pleasure and reality principles to be combined and satisfying both *id* and *ego* demands (Watkins & Savickas, 1990). Instead, the most recent developments of the psychodynamic approach to career guidance and counseling rely on the Kleinian theory, which supported the conception of vocational choices as internalized “objects” and “object relations” that reflect the individual's personal and familial history (Malach-Pines & Yafe-Yanai, 1999). In this regard, group career counselling with a psychodynamic focus was developed by Lehman, Ribeiro, Da Conceição, and Da Silva (2015) in the Brazilian context. This approach used British psychoanalytic theory and involved both the exploration of the subjective and identity dimension and the elaboration of a professional action plan meant to achieve a specific objective. The integration between the intra-psychic and the external world, through a clinical-operative method focusing on both personal reality and the labor market reality, seems to be one of most promising contributions to identify an agenda for future career interventions.

2.2 Objective

The present paper aims at proposing the PICS (Psychodynamic Intervention for Career Strategies) program, a group career counseling intervention model, inspired by the Kleinian psychoanalytic theory, in order to contribute to the advancement of studies in psychodynamic-oriented career counselling practices. In the light of a critical analysis of current research in career and work psychology, this conceptualization could provide new insights about not only vocational choices but more widely unconscious processes potentially affecting career decisions, strategies and adjustment. In detail, the manuscript deals with the conceptual model of the intervention and its technical aspects, including career counseling objectives, the structure of the intervention and the description of career sessions to clearly present the main methodological aspects involved. As well, further information about the counselor’s function, strategies and procedures, and monitoring and assessment is provided. Ultimately, potentialities and limitations of this group career intervention are discussed.

2.3 Conceptual model for the PICS program

The conceptual model of the PICS program stems from the integration of several psychoanalytic theoretical contributions, especially object relations theory (Klein, 1940) and Matte Blanco's theory of

the mind (1975). In detail, object relations theory seems to be one of the most fruitful approaches to grasp unconscious determinants of vocational choice (Malach-Pines & Yafe-Yanai, 1999), work motivation (Solem, 2016) and organizational dynamics (Diamond, Allcorn, & Stein, 2016). Specifically, from object relations theory the conception of work as a symbolic good object is derived which allows for the affirmation of vitality in the inter-psychic world (Levine, 2010). In this sense, career is given also affective and emotional meanings because it relates to symbolic object relations integrating the external reality (e.g., work context, professional status, relationship with managers and colleagues, job achievements) and the inner world (e.g., emotions, self-representations, aspirations, competences). Consistently with Bohoslavsky's clinical strategy (1977) and the psychodynamic focus proposed in career counselling and guidance (Lehman, Ribeiro, Uvaldo, & Da Silva, 2015), the Kleinian construct of reparation is considered as central for the development of professional identity and career project. Indeed, vocations reveal the self's need to repair internal objects via the choice of a profession (Bohoslavsky, 1977). As well, the individual seeks to elaborate his/her past and create future relationship possibilities by integrating the demands of the unconscious desire expressed in vocational identity, and those of conscious needs expressed in occupational identity (demands of the production system) (Lehman, Ribeiro, Uvaldo, & Da Silva, 2015). In addition, because reparation is triggered by guilt-feelings related to destructive impulses, it results in higher capacity to face loss and damage, integrate internal and external objects and develop *ego* capacities by means of autonomous and creative dynamics (Klein, 1957). Reparation can thus be intended as the capacity to effectively remedy to career challenges and failures by relying on one's own efforts and personal involvement and enrichment, apart from magical forms of restoration. In this regard, research demonstrated that reparation process at work is associated with higher realism (Lapierre, 1989), mutuality and collaboration (Krantz, 2006), and with the capability to be effective, learn from experience, problem-solving and take responsibility (Krantz, 2001). Besides, because reparation is intertwined with gratitude, it may be a potential trigger for job satisfaction (Buote, 2014), social support, helpful conduct and cohesiveness among colleagues (Buote, 2014; Caputo, 2015, 2016; Grant & Wrzesniewski, 2010). Alternative modes of functioning refer to manic reparation, mania and envy. Manic reparation – distinguished from the true and genuine form of

reparation - deals with magical and immediate forms of restoration leading to the over-estimation of one's abilities and narcissistic and grandiose attitudes towards career construction. Indeed, it is associated with diminished reality-testing and problem solving (Krantz, 2001), unrealism, grandiosity and uneffective efforts (Lapierre, 1989), as well as with ambitious goal setting and unrealistic confidence (Johnson, 2005) as defense strategy to alleviate guilt feelings, increase confidence and preserve the hope to repair (Roberts, 1994). Mania - based on manic feelings such as control, triumph or contempt[1] – represents a dismissing and avoidance-based strategy which is characterized by the lack of restorative activities and by the substantial denial of the relevance of developing a professional life project. It triggers rigid, concrete thinking, blame, massive projection and diminished capacity for reality testing (Krantz, 2001, 2006). As well, it leads to rampant cynicism and despair (Krantz, 2001) and to avoidance and less propensity to change (Nicolson, 2015), thus resulting in scarce effectiveness at work (Kets de Vries, 2010). Besides, envy - defined as the angry feeling that another person possesses and enjoys something else desirable, often accompanied by an impulse to spoil it - is characterized by the lack of restorative activities (similarly to mania) and by the tendency to desire others' misfortune and sabotage career goals and development in order to destroy the good nature of work as a symbolic object. Envy negatively affects individual career and organizational success (Menon & Thompson, 2010), leading to higher turnover intentions, job dissatisfaction (Vecchio, 1995), absenteism (Duffy & Shaw, 2000) and emotional disengagement (Erdil & Müceldili, 2014), as well it is associated with the use of self-handicapping strategies (Lange & Crusius, 2015) and lower career adaptability (Langher, Caputo, Nannini, & Sturiale, 2016). Besides, negative consequences of envy have been found also on group effort, trust, satisfaction and performance (Duffy & Shaw, 2000; Dunn &Schweitzer, 2006).

With regard to the contribution by Matte Blanco (1975), the conceptual model adopts a bi-logic theory of mind consisting in the interaction between the symmetric logic, which reigns in the unconscious

[1] In detail, according to object relations theory, control serves to deny the dependence on the object, triumph denies the depressive feelings of loss or damage of the object, and contempt denies the value and importance of the object.

realm and is mainly regulated by the generalization and symmetry principles[2], and the asymmetric logic, which rules conscious thought. This is consistent with a dual processing model (Epstein, 1994; Kahneman, 2003) suggested by decision theory, neuroscience and behavioral economics, dealing with the coexistence of an implicit, automatic, unconscious process and an explicit, controlled, conscious one. Indeed, empirical evidence confirms the role of emotional and non-conscious processes in career decisions and strategies (Krieshok, Black, & McKay, 2009; Yates, 2015). The constant interplay between these two mind's logics results in a reality testing-based knowledge and in an affective connotation of the context (Salvatore & Freda, 2011). Therefore, whereas perception allows the organization of the context in its cognitive meaning, affective symbolization allows its organization emotionally, actively contributing to orient thoughts, attitudes and behaviors. From this perspective, the construct of affective symbolization (Carli, 1990; Carli & Paniccia, 2003) seems to be particularly relevant to the understanding of career adjustment, because it pertains to the individual-context relationship in terms of emotional connotations and sense-making processes enacted to relate to career issues, beyond cognitive, intentional and rational meanings. In detail, based on McClelland's motivational theory (1985) and its subsequent developments in psychosocial research (Carli, Grasso, & Paniccia, 2007; Carli & Paniccia, 2003; Langher, 2009), four main different symbolizations can be detected which account for the relationship with work contexts and career construction paths (Langher, Brancadoro, D'Angeli, & Caputo, 2014). For instance, the competence model stems from an achievement-oriented symbolization of the context and refers to exploration, realism and goal pursuit, associated with higher personal commitment in developing one's career. Instead, the duty model is derived from a dependency-oriented symbolization of the context and is intertwined with the tendency to conformism, high compliance with well-defined rules and required tasks, thus showing poor autonomy and creativity in career construction. The familism model deals with an affiliation-oriented symbolization of the context where the need for friendly relationships, group belonging and social

[2] According to generalization, the unconscious logic treats a single thing (individual, object, concept, etc.) as it were a member of a more general class which contains other elements (e.g., My boss is part of a more general class of authoritative figures, including also my father), as well it treats the converse of any relation as identical to it because of symmetry (My boss is my father).

approval is perceived as central, within a self-referential dynamics, without promoting any useful competence for career development. Then, the grandiosity model is grounded on a power-oriented symbolization of the context and refers to the tendency to have control over others and to be influential on the environment, whereas career development is characterized by omnipotence, competitiveness and greatness of scope or intent.

2.4 Technical aspects

The main components of the model include the career counselling objectives, the structure of the intervention, the description of career sessions, the counselor's function, strategies and procedures, as well as monitoring and assessment used in the counseling process.

2.4.1 Career counselling objectives

The PICS program was developed to stimulate career adjustment with regard to the entry into the labor market, work transitions and challenges, as well as to career development, being thus suitable for participants across different stages of career path and professional growth. The intervention has a multi-faceted aim, respectively focused on the development of job-related motivational, emotional and relational skills (affective domain), the promotion of perceived work self-efficacy (cognitive domain) and the enhancement of job search and self-promotion (behavioral domain).

Without excluding the role of rational processes and beliefs, we consider career adjustment as mostly depending on the specific relation that people (mostly unconsciously) establish with their own career as a symbolic object: both internal, in terms of productive competence as self-perception to be able to create something good; and external, in terms of productive objective as capability to achieve effective goals, negotiate with others and maintain good work relationships. In other words, we could say that *career adjustment stems from the feeling of holding a productive competence and of realizing productive objectives*. To this purpose, the intervention aims at promoting two main psychological resources involved in career adjustment processes from a psychodynamic perspective: reparation and competence-orientation. Reparation allows the preservation of affective investment at work, the promotion of autonomy and creativity in career construction, as well as the propensity to effectively face career challenges and failures and to rely on personal commitment and effort to elaborate a

professional life project. Competence-orientation, besides, encourages career representations where the individual perceives the relevance of goal achievement in work contexts, rather than being exclusively focused on creating a sense of acceptance and belonging, maintaining status and power-based dynamics or complying with taken for granted duties. This requires the development of more mature affective symbolizations revealing the emotional capacity to exploration, knowledge and exchange. By exploration we mean greater flexibility and curiosity in the affective categorization of the reality, without relying on automatic and taken for granted symbolizations, whereas unexpected events are deemed as potential information and learning opportunities rather than as something irrelevant to be ignored. Knowledge refers to the recognition of what is different, stranger or new, without immediately transform it into something familiar and emotionally well-known, within a complex analysis of the reality which simultaneously includes information about the self, the other and the context. Then, exchange is intended as reciprocal transaction, negotiation and collaboration with others about shared goals which prevent the possession, the control or the denial of the other person, as different emotional strategies to avoid relational mutuality triggered by the fantasies of having the power to deservedly demand, influence or make the otherness predictable.

2.4.2 The structure of the intervention

Consistently with the psychodynamic approach to career counseling proposed by Lehman et al. (2015), the PICS program is a group-based intervention. The number of participants should generally range from 6 to 10, which is considered adequate for the maintenance of group integration dynamics and for a wealth of contributions. Indeed, a smaller number may not be suitable to be divided into subgroups for work activities; as well a higher number may not favor enough interactions among all group members and allow individualized feedbacks. The group technique was used, accordingly to Zimerman's (1993) classification, as a group work with treatment function focusing both on the individuals and on group relationships. Indeed, it deals with a relational back-and-forth process where the individuals' demands can inspire the group's reflections (Lehman et al., 2015). The treatment function is not conceived in terms of an individual-based clinical intervention. Instead, it pertains to the analysis of some shared basic unconscious dynamics underlying the symbolizations of work contexts and career paths, which

may disadvantageously prevent individuals from projecting themselves into the future and allowing the construction of relationships within the labor market (Fernandes, Svartman, & Fernandes, 2013). In addition, despite the intervention being based on some general core themes and well-defined activities, its nature can be seen as substantially unstructured because the specific contents to be worked on are derived from spontaneous group projections and sense-making processes. In other words, whereas the intervention is structured from a methodological perspective - in terms of open-ended stimuli and sequence of activities provided – it is mostly unstructured with regard to group contents and processes.

With regard to the intervention design, the PICS program consists of five sessions during the course of five weeks (one session per week). All sessions last 3 hours, adding up to 15 hours of total intervention time. The duration is shown to be sufficient and avoids dispersion to other life themes (Lehman et al., 2015). Besides, it is consistent with what suggested by Brown and Ryan Krane (2000), who found that the effect size of career counselling increases up to five sessions (.24 for one session, .47 for two to three sessions, and 1.26 for four to five sessions) and then tends to precipitously decrease.

Overall, the first two sessions of the intervention focus on the exploration of fantasies about the labor market, the recovery of career narratives about past and current work experiences and the analysis of emotional expectations about future career development. The last three sessions, instead, are dedicated to reflections on job skills and work contexts and opportunities, the relational dynamics enacted with managers, colleagues and clients, and the elaboration of an action plan. Consistently with what suggested by Lehman et al. (2015), the third session is an intermediate moment between subjective construction and reality, where each person deals with more realistic outlooks on the labor market and on himself/herself.

2.4.3 Description of the sessions

In order to illustrate the proposed model and the main methodological aspects involved, the description of the sessions is reported as follows. For each session specific goals, general core themes and exercises are defined.

The first session

Session 1, entitled “The labor market”, focuses on establishing a suitable setting for group career intervention, promoting personal acquaintance among group members and exploring their initial demands and expectations about the intervention itself. The session mainly deals with the core theme of fantasies about the labor market through an exercise entitled “Symbolic Space”, where participants write down their free associations on post-it notes and organize them on a large poster in order to build a shared map. The main goals of the session refer to analyzing participants’ meanings that shape a shared representation of the labor market; it also refers to setting up specific common objectives of the group participants to be addressed along the course of the intervention. This allows to favoring participants’ active involvement in the intervention process, strengthening the working alliance and customizing the intervention based on participants’ specific needs and demands.

The second session

Session 2, entitled “Career narratives”, focuses on developing participants’ coherent career narratives, facilitating personal openness and awareness, and fostering sharing and identifications among group members. The session mainly deals with the core theme of career decisions and development paths through an exercise entitled “Career Choices”, adapted from the photolangage projective technique (Baptiste, Belisle, & Pechenart, 1991). Participants share with the group their past work experiences and the ones desired for their future, via the choice of black-and-white printed photos. The main goals of the session refer to elaborating past work experiences by acquiring information about the self, individual vocations and sense-making processes in career decisions and strategies, and exploring new development paths in terms of desired job changes and career future-orientation. At the end of the session, as homework assignment, participants are asked to write a cover letter for a specific job application or professional proposal accordingly with what desired for their future.

The third session

Session 3, entitled “Self-presentation”, focuses on progressively moving from subjective construction to reality, developing more realistic outlooks on the self and the labor market, anchoring career desires and expected changes to concrete career opportunities. The session mainly deals with the core theme of the relationship between job skills and demands of the labor market. To this purpose, an exercise

entitled “The cover letter” is used, which aims at working on cover letters written by participants as requested in the previous session. The scope of this activity does not aim at providing correct information about a well-done cover letter but at favoring new insights about self-presentation, developing a re-definition of personal job skills and promoting more realistic outlooks on work contexts and career opportunities. The main goals of the session are to reflect on one’s professional competences and their potential usability in the labor market, as well as to explore specific needs and demands of clients and work contexts.

The fourth session

Session 4, entitled “Meeting the labor market”, focuses on concretely experiencing some real-life based job scenarios, looking at problems or situations from different perspectives and preparing for a variety of challenging career situations. The session is mostly focused on the core theme of the relational dynamics enacted in approaching to the labor market, through an exercise entitled “Job interview”, which is based on the role playing technique as a means to enact relational dynamics and reflect on evoked emotions rather than to perform correct behaviors and prevent potential mistakes. Participants can build up experience and self-confidence with handling these situations in real life, by reflecting about symbolizations – such as competence, duty, familism and grandiosity (Langher, Brancadoro, D’Angeli, & Caputo, 2014) - accounting for the relationship with work contexts and career construction paths. The main goals of the session aim at reflecting on one’s emotional acting outs and developing relational competences in facing career situations.

The fifth session

Session 5, entitled “Me and the future”, focuses on helping participants detect additional sources of support as well as anticipate problems that may arise once the group has concluded, by promoting strategic competences for better adjustment to the external reality. The session is mostly focused on the core theme of career planning, through an exercise entitled “Future plans” where each participant is asked to briefly write down a future plan to be realized in the short term after the conclusion of the intervention. This is in order to develop a more realistic attitude towards the future and favor psychic integration between present and future. The main goals of the session aim at promoting the elaboration

of an action plan and at detecting potential context-related resources deemed as useful for one's career development. In the last part of the session, participants are asked to share about the overall group experience, as well as to report satisfaction with the counseling intervention in responding to the specific career objectives that the group set up in the first session.

2.4.4 The counselor's function

The counselor has a nondirective function and acts as a process facilitator, by encouraging interactions and exchanges among the group members and further exploration of what proposed by them, without interrupting the group process or providing very directive suggestions. Indeed, despite the counselor having a different function respect to the other group members, s/he is part of the group and supports its associative process within the intervention setting, guaranteeing a safe mental space. The main function is promoting participants' reflections about career-related symbolizations and fantasies and helping them express and elaborate their emotional experience regarding the construction of a professional life project. Given the specific theoretical focus of the conceptual model, the group counselor needs a psychodynamic background along with a relevant professional experience in career counseling and guidance. Indeed, from a methodological perspective, the counselor has a double-faceted objective: (i) promoting participants' understanding about unconscious meanings emerging from their narratives about the labor market and career paths; (ii) help participants think about their symbolic dynamics enacted in relating to work contexts, facing job challenges and failures and developing their own career. Some key-concepts can be useful to practically orient the counselor's work: interpretative function, emotional thinking, and countertransference. By interpretative function we do not merely mean the potential use of technical interventions aimed at linking participants' feelings, thoughts or behaviors to their unconscious meanings as emerging from spontaneous narratives. Moreover, it refers to suggesting connections between what happens in the "here and now" of the counseling process and what relates to the "there and then" of the participants' professional life stories and reference work contexts, based on the generalization and symmetry principles from Matte Blanco's bi-logic of mind. By emotional thinking we mean the competence to differentiate facts and emotions, which precisely characterizes the psychological analysis of events. In our perspective, the processes of elaborating

information about the reality are not entirely conscious because affective symbolization serves as a mediator between facts and emotions. Therefore, emotions can represent a relevant instrument to infer and grasp the rules governing the unconscious logic while relating to the reality; as well the analysis of events may allow the reflection about underlying affective symbolizations as alternative to acting out emotions. Then, countertransference - as complex of feelings characterizing the counselor's experience in terms of reaction to participants' transference along the course of the intervention – can be deemed as a valuable source of information about the relational dynamics overall enacted by the group towards the counselor's function, the group objectives and the career intervention process more widely. In this sense, also group malfunctioning and conflicting responses need to be emotionally welcome within a climate of authentic acceptance and empathy, in order to be later analyzed accordingly.

2.4.5 Procedures and strategies

The intervention included five ingredients identified by Brown at al. (2003), empirically supported in further research (Reese & Miller, 2010), as making a significant contribution to the effectiveness of the intervention: workbooks and written exercises, individualized interpretation and feedback, world of work information, attention to building support and modeling. Indeed, a meta-analysis by Brown et al. (2003) comparing the effectiveness of 62 interventions showed that studies that contained none of these components achieved an average effectiveness rating of .22; whereas those with one, two, ore three of these components averaged .45, .61, and .99 respectively. These components were adapted taking into account the psychodynamic nature of our intervention and based on the specific demands and the situations of participants. In more detail, workbooks and written exercises were included in several activities, with the aim of expressing emotional associations evoked by the labor market (session 1), providing self-presentation in a cover letter (session 3), and elaborating an action plan (session 5). Given the psychodynamic framework of career counseling and the treatment function of the group format discussed above, individualized interpretations and feedbacks are provided along the course of the entire intervention by both the counselor and other members, mainly with regard to individual narratives about career decisions and development paths (session 2) and future planning (session 5). With regard to world of work information, the last three sessions focus on promoting more realistic

outlooks on the labor market and career options (e.g., opportunities, work activities, training requirements, etc.). Given the nondirective function of the counselor, such information is not gathered through activities of linear transmission and cognitive processing but via group exchanges and counselor's suggestions. In other words, world of work information are chosen based on their relevance for group members and acquired by involving participants in searching for it. Indeed, participants are provided with opportunities to engage in and work on the exploration and analysis of the labor market, focusing on the relationship between job skills and demands (session 3), integrating perspectives from clients and managers in working contexts (session 4) and taking into account the wider environment in which job activity takes place (session 5). Attention to building support for participants' career choices, decisions and plans may be regarded as a key-point of the intervention across sessions. Indeed, the intervention aims at encouraging participants' emotional capacity to exploration, knowledge and exchange and, specifically, helps them detect additional sources of support which are available in their networks (session 5) for gaining better adjustment to the external reality. Then, modeling is mainly introduced by vicarious learning provided by fellow participants through group work over the course of the sessions, thus observing members who have successfully used decision making or career implementation strategies. In particular, photolangage (session 2) and role play (session 4) represent two techniques facilitating identifications with other participants with respect to career decision making and informing about others' behavioral responses able to master challenges situations, respectively. Additionally, some playful group techniques are used such as free association, brainstorming, and analogical methods, which may facilitate access to verbalizations, exposing internal contents or unexplored contents in a non-threatening manner.

In listening to participants describing their experiences, the counselor may use fluctuating attention, focusing on their flows of associations and emphasizing emphatic validations; as well, s/he may rely on the emotional analysis of the language as a means to explore participants' affective symbolizations about specific career issues. According to the "double reference" principle - both lexical and symbolic - implicitly connected to the language (Fornari, 1979), it is possible to capture the emotional and symbolic dimensions *running through* the discourse, apart from its intentional structuring or cognitive

sense. This requires a process of deconstruction of the typical linguistic links of the dividing and asymmetrical way of the mind (operational function of language), to achieve the reconstruction of the most common chains of associations between “dense words”, based on the isomorphism with the psychoanalytic free associations method (Carli & Paniccia, 2002; Carli, Paniccia, Giovagnoli, Carbone, & Bucci, 2016). Dense words are those with the maximum of polysemy and the minimum of ambiguity, in terms of being emotionally meaningful and potentially evoking affective symbolizations, even when isolated from the discourse context. For example, in the sentence “The labor market is complex”, the word “complex” shows a scarce emotional density because it needs further specification within the discursive context, in order to make its underlying emotional connotation clearer. Completely different is the sentence “The labor market is a jungle”, where the word “jungle” is characterized by higher emotional density and lower ambiguity of meaning, thus informing about the potential symbolization of the labor market as aggressive and hard to manage because of the fight for survival.

In line with this, the counselor mainly encourages participants’ elaboration by supporting their associative processes so that affective symbolizations may progressively emerge. Consistently, more explorative interventions should be preferred, such as invitations to say anything that crosses the participants’ minds on the subject and clarifications involving a reformulation of their verbalizations whose details need to be further elucidated. Confrontations and interpretations, respectively aimed at addressing issues participants tend to avoid or at making the meaning of their thoughts, feelings, and behaviors conscious, are less frequently used, moreover at the beginning of the counseling process. In such cases, however, it can be useful that confrontations and interpretations mostly rely on the observation of shared dynamics or issues and are addressed to the group rather than to single individuals.

2.4.6 Monitoring and assessment

With specific regard to procedures for monitoring the ongoing group process, at the end of each session participants are asked for feedbacks on what they have learned, by brainstorming about thoughts and perceptions regarding the proposed activities. In addition, the counselor may use some indicators to be

rated for each session, such as the participants' level of involvement and activation, approval and satisfaction with the proposed activities, achievement of the expected objectives of group work, exchange and sharing among the members. As well, narrative reports may be drafted thus providing further qualitative information about the group's process, goals, and relationship with the counselor. In addition, the counselor may monitors for his/her countertransference responses to grasp some critical issues with regard to group process, potentially revealing resistances to change or maladaptive functioning. In detail, three problematic areas contrasting true reparation can be detected on the basis of different group transference processes as follows. The feelings of disengagement, hostility and resentment experienced by the counselor may be reactions to the group's use of manic defenses – referring to control, triumph and contempt, respectively - overall aimed at denying the dependence on the intervention and preventing from coping with career goals. Furthermore, inadequateness, incompetence, inefficacy in dealing with the intervention may suggest a potential attack on the counselor's professional role, capacity and impact, as a result of envious dynamics enacted by the group to destroy the good nature of the intervention and so sabotage the achievement of career goals. Then, boredom, dissatisfaction and uncertainty may reveal the counselor's perception of the group progress as unable to provide actual relief and be fully satisfactory and authentic, probably as a response to the group's reliance on manic reparation, involving immediate solutions and magical forms of restoration, characterized by unrealism and lack of effort to pursue career goals.

It is also important that the counselor monitors for his/her perceived self-efficacy in pursuing the expected objectives for each session, with specific regard to favoring participants' higher self-awareness, knowledge about the labor market and work contexts, decision making for the development of a professional life project, and the enhancement of personal resources for career adjustment. Then, as indicated in the intervention protocol, the assessment of career intervention is carried out in the last session by asking participants for feedbacks about the achievement of career goals shared and set up by the group in the first session. As well, an agile questionnaire may be administered including information about the overall satisfaction with the experience (in terms of involvement and activation, proposed activities, achieved objectives, exchange and sharing with other group members), the

perceived efficacy of the intervention (in terms of self-awareness, knowledge about the labor market, career decision making, personal resources for career adjustment) and an open-ended question for any notes, comments and suggestions.

2.5 Discussion

The present paper provides a psychodynamic conceptual model for career intervention, which is inspired by the Kleinian psychoanalytic theory, thus consenting to further deepen and develop the contributions of object relations theory to vocational and career-related fields. In particular, a framework on symbolic relational dynamics involved in career adjustment is proposed, which stems from the construct of reparation (Klein, 1957) as central process for the development of professional identity and career growth. Indeed, reparation relies on the capacity to effectively remedy to career challenges and failures, apart from magical forms of restoration and other dysfunctional responses in approaching career issues as envy and manic defenses. Besides, consistently with a bilogic of mind (Matte Blanco, 1975), the model consents to take into account both conscious and unconscious processes, beyond a still dominant rational paradigm in current research on career decision-making and planning (Krieshok, Black, & McKay, 2009; Yates, 2015). In line with this, the construct of affective symbolization provides a useful means to explore emotional connotations of work contexts and sense-making processes enacted in career construction (Langher, Brancadoro, D'Angeli, & Caputo, 2014).

With regard to the main potentialities of the career intervention here proposed, the career counseling objectives simultaneously focus on affective, cognitive and behavioral domains, thus affecting several career-related skills and individual variables within a complex and dynamic frame. In terms of its application, the intervention is suitable for clients across different stages of career path and professional growth, such as the entry into the labor market, work transitions and career development. In addition, it is designed according to what suggested by empirical research on the effectiveness of career interventions, with regard to its length (Brown & Ryan Krane, 2000) and critical ingredients making a significant contribution (Brown at al., 2003; Reese & Miller, 2010). As well, the use of group work with treatment function focusing both on the individuals and on group relationships (Lehman et al., 2015; Zimerman, 1993) provides several advantages, such as favoring exploration, collaboration,

vicarious learning and mutual exchange. Besides, the relational context of the group may promote higher socialization among participants, thus resulting as more supportive and preventing from isolation, and greater consistency with reality-based interactions that are similar to those emerging in everyday work contexts.

However, some limitations need to be acknowledged with regard to the theoretical and technical implications of the model. Despite the intervention relying on a well-defined protocol and being structured from a methodological perspective in terms of sequence of activities provided, it requires training and specific knowledge of the psychodynamic background in which the conceptual model of the intervention is rooted. As well, it may be not suitable for clients having serious work-related difficulties, which may be better addressed within an individual setting, or facing existential crises and showing clinically relevant issues, which should be dealt with in psychotherapy. In addition, despite the length of the intervention being optimal according to what suggested by empirical research, the intervention is quite time-limited and the sequence of sessions should not be interrupted. Therefore, clients' partial participation in the intervention and discontinuity in the group process might result in lower impacts of the counseling on their career adjustment processes. Another limitation concerns the lack of evaluation studies of the effectiveness of this intervention model to date, despite the existing qualitative and experience-based evidence. In this regard, further career practices may prove the applicability of the model in different contexts and its suitability for several types of clients. As well, future evaluation studies could be conducted to test the logic frame of the conceptual model, disentangle the complex interrelations among the variables involved and test its effectiveness according to a counterfactual perspective.

CHAPTER 3

A randomized control trial for the evaluation of the PICS program effects

The contemporary labour market is more and more characterized by instability and continuous changing in terms of employability, competencies and demands, also due to the role of economic globalization. Career paths are not linear anymore (Wickramasinghe & Perera, 2010) and professional insecurity is consequently increasing (Kalleberg, 2009). Indeed, multiple transitions can be experienced in the worklife and career development seems to rely on the capacity to plan a career path rather than to identify a specific role (Savickas, 2012). In this framework, people have to develop strategies to cope with the challenges of the labour market, in terms of flexibility, proactivity and adaptability (Bocciardi, Caputo, Fregonese, Langher, & Sartori, 2017; Del Corso, 2013; Savickas, 2012). This is particularly relevant in the transition from university to work settings, given the high rates of underemployment of high-skills young people and long-term unemployment (International Labour Organization, 2012). Indeed, nowadays there is a shared consensus about the need for promoting future career success, satisfaction and well-being (Ng & Feldman, 2007), as well as for preventing unsuccessful outcomes and increasing a suitable match between graduates and labour market (Koen, Klehe, & Van Vianen, 2012). As a consequence, the demand for career counselling is increasing in developed countries (Jacquin & Juhel, 2017) and the related economic issues have become a cause for concern to policy makers (Organization for Economic Co-operation and Development, 2004), who need evidence about the effectiveness of career counselling interventions (Council of the European Union, 2008; Plant, 2012). Indeed, "in this time of accountability, many third parties (e.g., administrators, funding agents, governmental personnel, advisory boards) are requiring documentation that vocational or career services are effective and provided in the most cost-efficient manner" (Whiston, Brecheisen, & Stephens, 2003, p. 391). Despite the impact of career interventions has been supported by several qualitative reviews (Fretz, 1981; Holland, Magoon, & Spokane, 1981; Myers, 1986; Swanson, 1995), the need for further quantitative research evaluating their effectiveness is advocated (Whiston et al., 2003). In this regard several pieces of research have demonstrated that career guidance and counselling are effective to enhance a wide range of outcomes, such as proactivity for personal growth and life

satisfaction (Wang & Shelley, 2011), adaptive resources in cognitive, behavioral and emotional sphere (Sabates, 2013), perceived self-efficacy in developing one's career (Di Fabio & Maree, 2013), and career planning and optimism (Spurk, Kauffeld, Barthauer, & Heinemann, 2015). As well, the effectiveness of career interventions is advocated with regard to the reduction of career indecision, anxiety uncertainty, and insecurity (Obi, 2015), and on the increased likelihood to find a job (Brenninkmeijer & Blonk, 2012).

3.1 Overview on past meta-analytic studies on career interventions

Most of the past meta-analytic studies focus on the effectiveness of career interventions intended as any treatment or effort aimed at enhancing an individual's career development or at enabling the person to make better career-related decisions, consistently with the widespread and influential definition provided by Spokane and Oliver (1983). As also noted by Walsh, Savickas and Hartung (2013), according to this broad definition, a range of interventions can be included such as individual or group career counselling, workshops or classes.

The initial meta-analytic studies about career counseling outcomes pertained to career-education strategies (Baker & Popowicz, 1983) and individual, group or class, and alternative career interventions (Spokane & Oliver, 1983), respectively. Baker and Popowicz (1983) reported an overall effect size (ES) of .50 for 18 career-education studies from 1970 to 1982; instead, Spokane and Oliver (1983) evaluated 52 studies carried out from 1950 to 1979 out of a total of 6,700 records, resulting in a mean ES of .85 over all types of career interventions. A further work by Oliver and Spokane (1988) on 58 studies published between 1950 and 1982 found an overall ES of .82. This work was replicated by Whiston, Sexton, and Lasoff (1998) in an updated meta-analysis on 47 studies published between 1983 and 1995 and found substantially lower and moderate effects of career interventions, with an unweighted ES of .45 and a weighted ES of .30. As well, a meta-analysis by Brown and Ryan Krane (2000) examining career interventions specifically designed to facilitate career choice found an overall average weighted ES of .34, consistently with the findings by Whiston et al. (1998). In this regard, a meta-analysis of job search interventions (Liu, Huang, & Wang, 2014) found that the odds for obtaining employment were 2.67 times higher for job seekers who participated in a job search

intervention as compared to those in the control group. Then, a study by Spokane and Nguyen (2016) on 23 reviews of research on the evaluation of career assistance from 1970 to 2014 indicated that in meta-analytic reviews of controlled career intervention studies treated participants were better off than 60% to 67% of control participants, consistently with a weighted ES of .30. Whereas, a recent meta-analysis of career choice interventions (Whiston, Li, Goodrich Mitts, & Wright, 2017) - which is a replication of the work by Brown and Ryan Krane's (2000) - including 57 published and unpublished studies, produced a weighted mean effect size of 0.35. Overall, despite generally positive effects having been found, career interventions showed a variable rather than a uniform effect, depending on treatment types and modalities, outcomes and examined characteristics. With regard to treatment types and modalities, Oliver and Spokane (1988) sought evidence that different interventions had different effects, indicating career classes as the best method of delivering career assistance. Instead, Whiston et al. (1998) found that individual career counselling was the most effective practice, while self-directed interventions were the best in terms of cost-benefit ratio. A further meta-analysis by Whiston et al. (2003) showed that, when comparing different treatment modalities, there were few differences in terms of effectiveness among individual career counselling, groups, workshops and classes, with the exception of counsellor-free interventions (e.g., computer-assisted ones) which were not so effective. This result seems to be consistent with the recent meta-analysis by Whiston et al. (2017), which demonstrated that group counselling and individual counselling did significantly vary from computer alone interventions. Besides, career interventions have been demonstrated to differently contribute to several outcomes. Oliver and Spokane (1988) found that treatments influenced subjects' career decision-making, understanding of careers and career-related adjustment, compared to other possible outcomes (such as career-related knowledge or self-concept development). Whiston et al. (1998) replicated and extended the previous meta-analysis by Oliver and Spokane (1988), founding prevalent effects on career maturity and career indecision. The development of vocational identity was then indicated as main outcome by Brown and Ryan Krane (2000), while further research (Reese & Miller, 2010) highlighted that career interventions were effective in increasing career decision-making self-efficacy but not in decreasing career-decision making difficulties. However, measures of career

decision-making self-efficacy overall seem to have the largest effect sizes (Whiston, Li, Goodrich Mitts, & Wright, 2017). In addition, significant differences in effectiveness of interventions emerged based on certain critical ingredients or study characteristics (Brown & Ryan Krane, 2000). For instance, Oliver and Spokane (1983) found that the only significant predictor of ES was treatment intensity in terms of number of hours or sessions. Instead, Whiston et al. (1998) found that neither the length of time nor the number of sessions had an effect on ES; while Brown and Ryan Krane (2000) reported that ES tended to increase up to five sessions and then precipitously decreased. Then, with regard to the variability in the effectiveness of career interventions, research advocates the usefulness to understand what works with specific target populations (Oliver & Spokane, 1988). Indeed, some pieces of research highlighted that guidance efforts may be most effective with pre-teenage students (Oliver & Spokane, 1988) and that ES is higher for school students than for college ones (Whiston et al., 1998). Therefore, research questions about the effectiveness of career interventions should be more sophisticated and analytical (Oliver & Spokane, 1988), also because the existing meta-analytic studies include a variety of different types of interventions, often grounded on several delimited theoretical frameworks and exploring multiple career outcomes (Osipow, 1983), which make it difficult to derive reliable conclusions from effectiveness evidence.

3.2 Rationale and aim of the study

A recent review on career guidance and counselling by Bikos, Dykhouse, Boutin, Gowen and Rodney (2013) identified three main theoretical models, consistently with what reported by other authors (Hartung & Subich, 2011; Patton & McMahon, 2014), which refer to Person-Environment fit model, social-cognition theory (SCT) and social-constructivism. In brief, Person-Environment fit model (Holland, 1997) assumes that career success, satisfaction and stability are based on the coherence between the client's characteristics (e.g., interests, abilities, values, vocations, personality) and specificities of work settings. Therefore, interventions mainly aim at assessing job opportunities and career paths which better fit with individual job profiles. Instead, social-cognitive theory (Lent, Brown, & Hackett, 1994) focuses on cognitive factors (e.g., self-efficacy beliefs, outcome expectations, career preparedness) which, intertwined with individual and environmental variables (e.g., gender, ethnicity,

past experiences, social support, barriers), can sustain effective career-related decision-making and planning. In this sense, interventions are addressed to enlarge the client's professional opportunities, detect barriers and perceived obstacles to professional development and increase self-efficacy by working on false beliefs. Then, social-constructivism proposes a postmodern narrative approach (Savickas, 2005) according to which career decisions more widely refer to self-construction processes within a life-design paradigm. Autobiographical narratives about professional identity can enhance awareness about the relationship with the social context and life trajectories. In this framework, interventions aim at promoting both higher career flexibility and adaptability to cope with occupational challenges and sense of coherence and continuity.

Recent pieces of research have highlighted the limits of rationality and the abundance of non-conscious processes in career-related issues (Krieshok, Black, & McKay, 2009), the potential impact of unconscious meanings and symbolizations on career choices and experiences (Hood, 2008), as well as the importance of client's subjectivity in career intervention design (Müller, 2004). From this perspective, psychodynamic approach seems to be promising in helping participants to elaborate representations and meanings of self and jobs, and integrating subjective desires and objective possibilities (Lehman, Ribeiro, Uvaldo, & Silva, 2015). However, such an approach has no substantive presence in current career development literature (Mcllveen, 2014). Indeed, to our knowledge, evaluation studies about psychodynamic-oriented interventions are lacking to date, probably because of the problems of both conceptualization and measurement in the related empirical research.

The present study aimed at extending the research into the effectiveness of psychodynamic-oriented career interventions for improving career adjustment, by testing the short and long term effects of the PICS (Psychodynamic Intervention for Career Strategies) program, consisting in a five-session group career counseling, through a RCT. Our hypotheses were that after completing the program – at posttest and at 6-month follow-up - participants would have higher scores on measures of career adaptability (assumed as primary outcome) and other secondary career-related outcomes, such as search for work self-efficacy, work self-efficacy, career adjustment dynamics, affective investment at work, job search

intensity, job search effort, career satisfaction, job relations satisfaction, job relations satisfaction and job self-promotion.

3.3 Method

3.3.1 Participants and procedure

The sample for the main study was composed of adult psychologists who were registered at the Italian Psychology Certification Board[3] (with specific regard to the section of the Latium Region) not more than three years earlier, assumed as eligibility criteria.

The choice of conducting such an evaluation on this population relies on the fact that young psychology professionals show high unemployment rates at one and five years after graduation (respectively, 59% and 13%) and the lowest income levels among several professionals in the Italian context (AlmaLaurea, 2015). Indeed, Italy has one of the highest numbers of professional psychologists per capita in Europe (Cranney & Dunn, 2011). As a consequence, the current labor market poses psychologists the challenge of neo-professionalism and flexibility (Bosio & Lozza, 2013), thus requiring increasing competitiveness and entrepreneurship in new intervention areas, apart from the more traditional job sectors, such as private clinical consulting and healthcare settings that are over-saturated.

The recruitment process consisted in two steps. In the first step, the entire target population (N=2,606) was invited to voluntarily enroll in a career research-intervention program offered by the Psychology Certification Board of the Latium Region to newly registered professionals. Potential participants were informed by advertising on the institutional website and a newsletter sent by e-mail, followed by text alerts to their cell phones. This step required to complete an online questionnaire (pretest measure) after having given informed consent and to indicate availability to participate in a career intervention.

[3] According to Law n. 56 of 18 February 1989, in the Italian context psychologists can practice only after having passed the State Board Examination and being registered by the National Psychology Certification Board. The State Board Examination is controlled by a decree from the President of the Republic. To be admitted to the examination which allows the registration at the appropriate regional section of the National Psychology Certification Board, graduates in Psychology must be in possession of adequate documentation proving the completion of a one-year practical internship in accordance with modalities established by a decree of the Ministry of Education.

Participants who completed this first step (n=197, equal to 7.44% of the target population) were called on the phone by the project leader for participating in a face-to-face plenary meeting. This meeting aimed at introducing the career intervention and providing participants with further information about the evaluation study, with specific regard to their allocation to different groups and the next completion of two online questionnaires, respectively at the end of the intervention and six months later. In this second step, 82 participants (41.62% out of the total) agreed to participate and provided their signed informed consent. The majority of participants were female (80.5 percent), with a mean age of 32.09 years (SD=5.75), ranging from 26 and 50 years. With regard to educational variables, the final grade of university degree[4] was on average 106.88 (DS=4.71) and the number of postgraduate training courses was comprised between 0 and 3 (M=.91, SD=.76); whereas occupational characteristics highlighted that the half of the sample (50%) was currently employed, but only one out of five participants was employed as psychologist (20.7%). Consistently with a randomized control trial design, participants were randomly assigned to either a treatment group (n=41) or a control group (n=41) according to a computer-generated list of random numbers. Both the treatment and control group participants provided three repeated measures: about two weeks before the start of the intervention (Time 1), immediately after the five-week program two weeks later (Time 2), and six months after the end of the intervention (Time 3). The individuals in the wait-list control group were allowed to participate in the intervention after the completion of the six-month follow-up. The primary outcome of the present evaluation study was career adaptability, whereas other secondary career-related outcomes were also considered (i.e., search for work self-efficacy, work self-efficacy, career adjustment dynamics, affective investment at work, job search intensity, job search effort, career satisfaction, job relations satisfaction, job relations satisfaction and job self-promotion).

The study was reviewed and received approval by the research ethics committee.

3.3.2 The PICS program

3.3.2.1 Conceptual model

The conceptual model of the PICS program stems from the integration of several psychoanalytic theoretical contributions, especially object relations theory (Klein, 1940) and Matte Blanco's theory of

[4] The final grade of university degree in Italy ranges from 66 to 110 cum laude.

the mind (1975). Consistently with Bohoslavsky's clinical strategy (1977) and the psychodynamic focus proposed in career counselling and guidance (Lehman, Ribeiro, Uvaldo, & Da Silva, 2015), the Kleinian construct of reparation is considered as central for the development of professional identity and career project, as a means to elaborate past and create future relationship possibilities by integrating the demands of the unconscious desire expressed in vocational identity, and those of conscious needs expressed in occupational identity. Besides, the reparation process at work is associated with higher realism (Lapierre, 1989), mutuality and collaboration (Krantz, 2006), and with the capability to be effective, learn from experience, problem-solving and take responsibility (Krantz, 2001). Therefore, it may allow the preservation of affective investment at work, the promotion of autonomy and creativity in career construction, as well as the propensity to effectively face career challenges and failures and to rely on personal commitment and effort to elaborate a professional life project. In addition, consistently with a bilogic theory of mind (Matte Blanco, 1975) grounded on the interaction between the symmetric and asymmetric logic (respectively ruling the unconscious and conscious thought), affective symbolizations may grasp unconscious dynamics accounting for the relationship with work contexts and career construction paths (Langher, Brancadoro, D'Angeli, & Caputo, 2014). Specifically, competence-orientation may encourage career representations where the individual perceives the relevance of goal achievement in work contexts, rather than being exclusively focused on creating a sense of acceptance and belonging (familism), maintaining status and power-based dynamics (grandiosity) or complying with taken for granted tasks (duty). This requires the development of more mature affective symbolizations revealing the emotional capacity to exploration, knowledge and exchange.

3.3.2.2 Objectives and description of the program

The PICS program was developed to stimulate career adjustment with regard to the entry into the labor market, work transitions and challenges, as well as to career development, being thus suitable for participants across different stages of career path and professional growth. The program focuses on the analysis of some shared basic unconscious dynamics underlying the symbolizations of work contexts and career paths, which may disadvantageously prevent individuals from projecting themselves into the

future and allowing the construction of relationships within the labor market (Fernandes, Svartman, & Fernandes, 2013). The intervention has a multi-faceted aim, respectively focused on the development of job-related motivational, emotional and relational skills (affective domain), the promotion of perceived work self-efficacy (cognitive domain) and the enhancement of job search and self-promotion (behavioral domain).

The PICS program is a group-based intervention, generally including from 6 to 10 participants, and consists of five sessions during the course of five weeks (one session per week)[5]. All sessions last 3 hours, adding up to 15 hours of total intervention time. The duration is shown to be sufficient and avoids dispersion to other life themes (Lehman et al., 2015). Besides, it is consistent with what suggested by Brown and Ryan Krane (2000), who found that the effect size of career counselling increases up to five sessions (.24 for one session, .47 for two to three sessions, and 1.26 for four to five sessions) and then tends to precipitously decrease. Overall, the first two sessions of the intervention focus on the exploration of fantasies about the labor market, the recovery of career narratives about past and current work experiences and the analysis of emotional expectations about future career development. The last three sessions, instead, are dedicated to reflections on job skills and work contexts and opportunities, the relational dynamics enacted with managers, colleagues and clients, and the elaboration of an action plan. Consistently with what suggested by Lehman et al. (2015), the third session is an intermediate moment between subjective construction and reality, where each person deals with more realistic outlooks on the labor market and on himself/herself. Besides, the intervention included five ingredients identified by Brown at al. (2003), empirically supported in further research (Reese & Miller, 2010), as making a significant contribution to the effectiveness of the intervention (i.e., workbooks and written exercises, individualized interpretation and feedback, world of work information, attention to building support and modeling), which were adapted to the psychodynamic nature of the intervention.

3.3.3 Pilot study

Before conducting the RCT here presented, a pilot study was carried out on the members of the relevant population who did not form part of the final sample, in an attempt to evaluate the project's

[5] A detailed description of the sessions is reported in the paragraph 2.4.3 of the present dissertation.

feasibility and adverse events, for improving the study design as well as the implementation of the intervention. Seventy-eight participants voluntarily enrolled in the program by a web form, after having completed an online questionnaire and given informed consent. However, 52.6% of them were no-shows because they did not initiate the intervention; whereas 24.4% of them were adequately treated, thus complying with at least 80% of the intervention according to protocol. Specifically, 11.5% of participants completed only one session, 6.4% two sessions, 5.1% three sessions, 15.4% four sessions, and 9% all the five sessions. The pilot study thus allowed changes to the apparatus and procedures to be implemented. For instance, a better promotion and advertising campaign for the initiative was carried out to get into contact with the target population more effectively. Besides this, a two-step procedure for the enrollment in the intervention (including a face-to-face plenary meeting before the start of the program) was required to reduce the rate of no-shows. The intensity of the program was also increased by scheduling one session per week (instead of one session every two weeks) in order to reduce dropouts due to the more extended duration of the intervention. Then, participants' satisfaction ratings about the program process were collected, thus providing suggestions to review the intervention activities accordingly, based on critical and successful program-related issues reported by participants.

3.3.4 Measures

3.3.4.1 Socio-demographic characteristics

Participants were asked to provide information about gender, age, occupational and educational characteristics. With regard to educational characteristics, both the final grade of university degree and the number of postgraduate training courses were inspected. Indeed, they may be indicative of previous academic success and professional development dynamicity in developing one's career, respectively. With regard to occupational features, we collected data on current employment status, which may be deemed as a relevant variable due to the specific objective of our study aimed at increasing employability and promoting career change in the long run. In addition, participants were asked to indicate whether they were employed as psychologists, because the coherence and fit between previous academic training and type of employment may be a more precise and consistent indicator of their professional status and achieved job success.

3.3.4.2 Primary outcome

The primary outcome of the present study was career adaptability defined as a psychosocial construct that reflects resources for managing the present and impending work and career challenges that may affect personal integration in social environment (Savickas, 1997). The choice of a psychodynamic measure as primary outcome was not possible, due to the scarce use of psychodynamic approach in career and work research and to the difficult problems related to operationalization in the psychoanalytic tradition (Silver & Spilerman, 1990; Walsh & Osipow, 1990). From this premise, compared to other well-studied constructs, career adaptability was deemed as having greater potentialities in explaining career adjustment and more dynamic sense-making processes. Therefore, despite its being developed within a constructivist approach (not a psychodynamic one), career adaptability was preferred as primary outcome because it could best grasp fantasies regarding career and the labor market, within an individual-context paradigm, and because it provided a widespread and validated measure.

Career adaptability has been proposed to be particularly relevant during career transitions such as unemployment (Savickas, 2002) and has been found to predict reemployment quality (Zikic & Klehe, 2006). Indeed, a recent meta-analytic study (Rudolph, Lavigne, & Zacher, 2017) has highlighted a wide range of significant outcomes associated with career adaptability, such as measures of adaptivity (i.e., cognitive ability, big five traits, self-esteem, core self-evaluations, proactive personality, future orientation, hope, and optimism), adapting responses (i.e., career planning, career exploration, occupational self-efficacy, and career decision-making self-efficacy), adaptation results (i.e., career identity, calling, career/job/school satisfaction, affective organizational commitment, job stress, employability, promotability, turnover intentions, income, engagement, self-reported work performance, entrepreneurial outcomes, life satisfaction, and positive and negative affect). Besides this, the incremental predictive validity of career adaptability was demonstrated, above and beyond other individual difference characteristics, for a variety of career, work, and subjective well-being outcomes. Specifically, previous research on the effectiveness of career interventions on career adaptability improvement has shown promising result on students (Mulawarman, Munawaroh, & Nugraheni, 2016)

and youth (Silva, Coelho, & Taveira, 2017). This construct is particularly relevant for the rationale of the present study, as "readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions" (Savickas, 1997, p. 254). Career adaptability is not conceived as a fixed construct but rather refers to self-regulatory capacities that may change over time and situations, and that are activated by factors within the person, the environment and their interaction (Savickas & Porfeli, 2012). Career adaptability is conceptualized as a higher-order, hierarchical construct including four dimensions (Savickas, 1997; Savickas & Porfeli, 2012). Concern refers to the extent to which employees are future-oriented and prepare for upcoming career tasks or challenges. Control is defined as the extent to which employees take personal responsibility with regard to influencing their development and work environment by showing self-discipline, effort and persistence. Curiosity involves employees exploring possible future selves and opportunities, and thinking about how they might influence different work roles and environments. Then, confidence deals with employees' beliefs that they can turn their career goals into reality, successfully solve problems and overcome obstacles.

Career adaptability was specifically measured by the career adaptability scale (CAAS) (Savickas, 2012) in the Italian-validated version (Soresi, Nota, & Ferrari, 2012). It is a 24-item scale which measures the four aforementioned dimensions of concern, control, curiosity and confidence with six items per dimension. Participants are asked to indicate to what extent they have some abilities by using a five-point Likert scale ranging from 1 (not strong) to 5 (strongest). Some sample items are "Thinking about what my future will be like" (concern), "Making decisions by myself" (control), "Exploring my surroundings" (curiosity) and "Performing tasks efficiently" (confidence).

3.3.4.3 Secondary outcomes

Search for work self-efficacy. This dimension was measured by the search for work self-efficacy scale (SWSES), a 12-item validated tool (Pepe, Farnese, Avallone, & Vecchione, 2010), assessing perceived capability to manage and cope with different situations in the search for a job. The scale is suitable for both employed and unemployed respondents, because the instructions ask to refer to the search for a job for those already employed or alternatively to the search for a new job for those who are

unemployed. It measures four dimensions composed of three items each: *frustration coping* refers to managing difficult moments while searching for a job; *enterprising exploration* refers to actively committing oneself to searching for a job; *proactive career-planning* refers to actively planning one's own professional future and *relational integration* refers to acquiring and maintaining functional relationships in work settings. For each item, participants were asked to assess a set of work-related skills measured with a five-point Likert scale that range from 1 – "not at all capable" to 5 – "completely capable". Namely, a sample item for the frustration coping dimension is "To consider failures more as challenges than as problems", for the enterprising exploration dimension is "To search for the information I need"; for the proactive career-planning dimension is "To build focused strategies in order to achieve objectives"; and finally for the relational integration dimension is "To respect the others' competencies". Data on reliability and validity of both total and subscale scores are provided in the study by Pepe et al. (2010).

Work self-efficacy. This dimension was measured by the work self-efficacy scale (WSES) (Pepe, Farnese, Avallone, & Vecchione, 2010), a 10-item tool assessing work-related efficacy beliefs and perceptions. The scale is suitable for both employed and unemployed respondents, because the instructions ask to refer to a current job or alternatively to a potential future job. It is composed of two different sub-scales (five items each): the first one refers to *relational willingness*, as predisposition towards or attention to manage interpersonal relationships (colleagues and direct superiors), as well as to work with colleagues with different characteristics and experiences; whereas the second one refers to *commitment*, in terms of learning new working methods, respecting schedules and work deadlines, and achieving assigned goals. For each item, participants were asked to assess a set of work-related skills measured with a five-point Likert scale that range from 1 – "not at all capable" to 5 – "completely capable". A sample item of the relational willingness scale is "To work with other colleagues", while a sample item of the commitment scale is "To complete an assigned task". Data on reliability and validity of both total and subscale scores are provided in the study by Pepe et al. (2010).

Career adjustment dynamics. Career adjustment is examined from a psychodynamic perspective by the Dynamic Career Scale (DCS) (see Chapter 1), a 16-item tool assessing different modes of functioning

in facing career failures and challenges. In detail, DCS measures four different dimensions. *Envy* is characterized by the lack of restorative activities and by the tendency to desire others' misfortune and sabotage career goals and development. *Mania* represents a dismissing and avoidance-based strategy which is characterized by the lack of restorative activities and by the substantial denial of the relevance of developing a professional life project. *True reparation* refers to the capacity to effectively remedy to career challenges and failures by relying on one's own efforts and personal involvement and enrichment. Finally, *manic reparation* – distinguished from the true and genuine form of reparation - deals with magical and immediate forms of restoration leading to the over-estimation of one's abilities and narcissistic and grandiose attitudes towards career construction. The DCS items are stated so to be suitable for both freelance professionals and employees and scored on a 7-point Likert-type scale - ranging from 1 (Not at all) to 7 (Completely) - indicating to what extent some thoughts could come to mind in facing some stressful and frustrating career situations. Some sample items regarding a failure situation in accomplishing an assigned job are as follows: "I knew it. No one would be able to do a better job anyway" (Envy), "I'd rather not have assignments if I must carry on useless work" (Mania), "I need to understand what I did wrong if I want to improve" (True reparation), "I know my true value. I will get other assignments" (Manic reparation). Data on reliability and validity of subscale scores are provided in the Chapter 1.

Affective investment at work. This dimension is examined by the Work-SMS (Work Symbolic Motives Scale) (Fregonese, 2017), a 12-item tool providing a general measure of affective investment, conceived as an endowing process of gratifying qualities to the work context, which make it valuable and effort-worthy. Affective investment is sustained by four interplaying sub-dimensions which respectively refer to different symbolic motives: achievement, affiliation, autonomy, power. *Achievement* is a drive to mastering complex challenges, finding solutions, overcoming goals, and meeting high standards of quality or success. *Affiliation* is a drive to establishing, maintaining, or restoring a positive affective relationship. *Autonomy* is a drive to guaranteeing self-development, self-determination and freedom from others' control. Finally, *power* is a drive to influencing, shaping and determining others' decisions or actions. Work-SMS is composed of a list of 12 adjectives, three per

each symbolic motive, such as effective (achievement), benevolent (affiliation), independent (autonomy), and prestigious (power). Respondents are asked to indicate to what extent each adjective describes their work context, on a 6-point scale (from 1= not at all to 6 = completely). Data on reliability and validity of the overall and subscale scores are provided in the study by Fregonese (2017).

Job search intensity. This dimension was assessed by a short version of the Preparatory and active job search measure (Blau, 1994), adapted to Italian though a back-translation process. It is a 6-item behavioral scale where respondents have to indicate how many times they had performed various search activities over the preceding six months on a 5-point scale: never, rarely (1 or 2 times), occasionally (3 to 5 times), frequently (6 to 9 times) or very frequently (at least 10 times). Items include both preparatory and active job search behaviors. Specifically, preparatory behaviors refer to gathering job search information and identifying potential leads during the planning phase of job search, i.e. "Read the help/wanted classified ads in a newspaper, journal, internet or professional association"; "Prepared/revised your resume"; "Used current within work context resources (e.g. colleagues) to generate potential job leads". Whereas, active behaviors involve the actual job search and choice process, i.e. "Sent your resumes to potential employers"; "Filled out a job application"; "Telephoned or emailed a prospective employer". The exploratory factor analysis conducted on a different sample of 176 participants extracted a single factor explaining for 60.86% of the overall variance, whereas the confirmatory factor analysis on the current sample confirmed the goodness of fit indexes as follows, χ^2 (11.079, *df*=9), CFI=.997, TLI=.995, SRMR=.023 and RMSEA=.034.

Job search effort. This dimension was assessed though a 3-item scale derived from the General job search effort measure (Blau, 1994), adapted to Italian though a back-translation process. Individuals are asked to indicate the total amount of effort or activity that they devoted to job search over a specific time period. The effort measures do not probe for specific job search behaviors; however, it may capture behaviors and cognitions (e.g., emotional energy, planning, and strategizing) important to the job search that may not be captured in an intensity measure. Participants reported their agreement with each assertion on a 5- point scale (1 - Strongly disagree, to 5 - Strongly agree), using a 6-month time frame. Specific items were, "spent a lot of time looking for jobs," "devoted much effort to looking for

jobs," and "focused my time and effort on job search activities. The exploratory factor analysis conducted on a different sample of 176 participants extracted a single factor explaining for 84.38 of the overall variance, whereas the confirmatory factor analysis on the current sample confirmed that the model was saturated and goodness of fit tests were not applicable.

Career satisfaction. Given the lack of existing validated measures on career satisfaction in the Italian context, a 3-item scale was created to measure career satisfaction, defined as the overall emotional directivity about one's career (Gattiker & Larwood, 1988). It refers to the satisfaction individuals derive from their own career, including the achieved career goals, the income level and professional advancement (Greenhaus, Parasuraman, & Wormley, 1990). This measure evaluates respondents' satisfaction with their work-related activities, salary and economic conditions, and opportunities for career growth and development on a 6-point likert scale (from 1 "Not at all" to 6 "Completely"). To distinguish career satisfaction from job satisfaction, respondents are asked to indicate their satisfaction based on their overall work experiences, regardless their occupational status and current employment. The exploratory factor analysis conducted on a different sample of 176 participants extracted a single factor explaining for 66.35% of the overall variance, whereas the confirmatory factor analysis on the current sample confirmed that the model was saturated and goodness of fit tests were not applicable.

Job relations satisfaction. This dimension refers to the satisfaction individuals derive from their job relationships. An ad hoc 4-item scale was created, because the existing job satisfaction measures are scarcely suitable for freelance professionals, as those included in our sample. The scale evaluates the respondents' satisfaction with their relationships with colleagues, managers/employers, clients and job environment more widely, by using a 6-point likert scale (from 1 "Not at all" to 6 "Completely"). The exploratory factor analysis conducted on a different sample of 176 participants extracted a single factor explaining for 75.12% of the overall variance, whereas the confirmatory factor analysis on the current sample confirmed the goodness of fit indexes as follows, χ^2 (0.483, *df*=2), CFI=1, TLI=1, SRMR=.007 and RMSEA=.000.

Job self-promotion. This dimension was measured through an ad hoc scale of 6 dichotomous items that evaluated the respondents' behaviors aimed at increasing their professional visibility and exposure.

Specifically, respondents were asked to check some tools generally used for self-promotion in the labor market, i.e. exchanges through informal networks (e.g., acquaintances, relatives, friends), exchanges with other psychologists, exchanges with other not psychology professionals (e.g., physicians, lawyers, engineers), writing of scientific or informative articles, use of social networks or blogs, publicity materials (e.g., business cards, flyers, brochures). This synthetic measure was developed intentionally to grasp the propensity to rely on job marketing and business strategies. Indeed, to date there are not validated measures about job self-promotion and the existing measures on job search strategies tend to be poorly suitable for freelance professionals, as those included in our sample. Because of the scarce reliability (KR-20=.46), this measure is used only for explorative purposes and no latent dimension underlying the items can be assumed.

3.3.5 Strategy of analysis

Looking at the external validity of the experiment, we also tested differences between our RCT sample and the target population in demographic characteristics to investigate its representativeness and potential generalizability of the results. As well, we explored whether a potential self-selection bias existed with regard to the participation in such a career intervention, comparing those who completed the required procedure for the enrollment in the program and those who did not, based on the examined study variables.

Whereas randomization guarantees the statistical equivalence between treatment and control group on not observed variables, to verify the internal validity of the experiment, we examined potential differences at baseline between the two groups across a wide range of observed variables, by using Student's t and Chi-square tests for quantitative and qualitative measures respectively. This is in order to eventually adjust the estimates of the intervention effects in next analyses, by adding control variables taking into account these differences. Besides this, rates of attrition and noncompliance with the intervention protocol were also examined, because losing sample members due to nonrandom events occurring after random assignment may lead to biased estimates of program effects.

To estimate the intervention effects on primary and secondary outcomes a 3 × 2 (Time by Condition) mixed design ANOVA was conducted. Indeed, this study used a randomized wait list-controlled,

repeated measures (pre, post and follow-up) mixed within- and between-subjects (control and treatment) design. We tested for interaction effects of time × condition and performed some contrasts comparing both T1 and T2, and T1 and T3 looking at the interaction term. This is in order to test whether there were significant changes in each of the outcome variables across the two conditions between pretest and posttest and pretest and follow-up, thus to examine short and long term effects respectively. Where assumptions of sphericity were violated as determined by Mauchley's test, we used the Greenhouse-Geisser adjustment to interpret the effects.

To compute the minimum detectable value of the effect size in our study (i.e. the minimum difference between groups that yields a statistically significant result), we performed some power analyses using G*Power 3.1.7 (Faul, Erdfelder, Lang, & Buchner, 2007). In detail, given power of .80, α error probability of .05 and nonsphericity correction ε of 1, tests for ANOVA repeated measures, between-within interaction, reveals that the minimum detectable effect size for the interaction effect (2 groups x 3 measurements) with a sample size of 82 participants is partial $\eta 2$ equal to .11 (which decreases to partial $\eta 2$ of .08 for T1-T2 and T1-T3 contrasts). It is estimated that only from medium to large effects can be thus detected, without considering potential problems of attrition and dropout which may lead to a reduction of sample size and consequent loss of statistical power. Therefore, instead of considering the statistical significance of the estimated effects, we look at their effect sizes expressed by partial eta-squared values, with .01, .06, and .14, respectively qualifying as small, medium and large effect sizes (Cohen, 1988). For analyzing data from an experimental perspective, we used the "intention to treat analysis" (ITT), which considers the subjects in the way they were randomized at the beginning of the trial, regardless of their compliance with the treatment protocol or withdrawal from the study. ITT analysis has become the gold standard for analyzing the results of trials with potential missing data due to noncompliance and drop-outs (Ye, Beyene, Browne, & Thabane, 2014). Indeed, ITT has several advantages such as preserving random allocation of participants and group comparability, balancing prognostic factors in the study groups, protecting the inferential basis of statistical analysis in RCTs and providing a pragmatic approach by reflecting the benefits of a treatment in a real life situation (Armijo-Olivo, Warren, & Magee, 2009). Sensitivity analyses were also performed by using two

imputation methods for missing data: last observation carried forward (LOCF) method, which assumes that subjects' responses are constant from the last observed value, and multiple imputation (MI) method, which creates multiple datasets replacing missing values by randomly generated values that are estimated by an imputation model (in this case, ten datasets were imputed based on a prediction model including all the study variables and the results obtained from each analysis were combined by using a pool function).

However, because ITT is more susceptible to type II error, tends to underestimate the effects of the treatment received and make the interpretation of results difficult when the proportion of drop outs is significant, we also conducted an exploratory analysis for intervention completers. Specifically, we performed a Per Protocol (PP) analysis which excludes participants who do not fully comply with the treatment protocol, albeit the groups of participants being compared may no longer have similar characteristics. Because such an approach estimates treatment effects without preserving randomization or accounting for potential confounding, it usually provides a lower level of evidence but better reflect the effects of treatment when taken in an optimal manner and can be particularly useful for analyzing the adverse effects of treatments. Besides, when participants' non-compliant behaviors are purely random or there are only never-takers – i.e. participants who reject an offered intervention, within a scenario where the intervention is only accessible to participants who are offered it (as in our case) - the PP estimate was demonstrated to be generally unbiased (Ye, Beyene, Browne, & Thabane, 2014). For the PP analysis, we considered treatment group participants as fully compliers if they had received at least 80% of the intervention according to the treatment protocol, as general cut-off assumed in current RCTs (Fergusson, Aaron, Guyatt, & Hebert, 2002; Hernán & Hernández-Diaz, 2012), i.e. if they had participated in at least four out of the five sessions required for completing the career program. Whereas, control group participants were considered as compliers with their assigned condition if they did not have participated in the examined intervention or also in other similar career initiatives during the course of the trial, in order to avoid contamination-related problems.

3.4 Results

Recruitment processes and flow are detailed in the diagram in Figure 3.1.

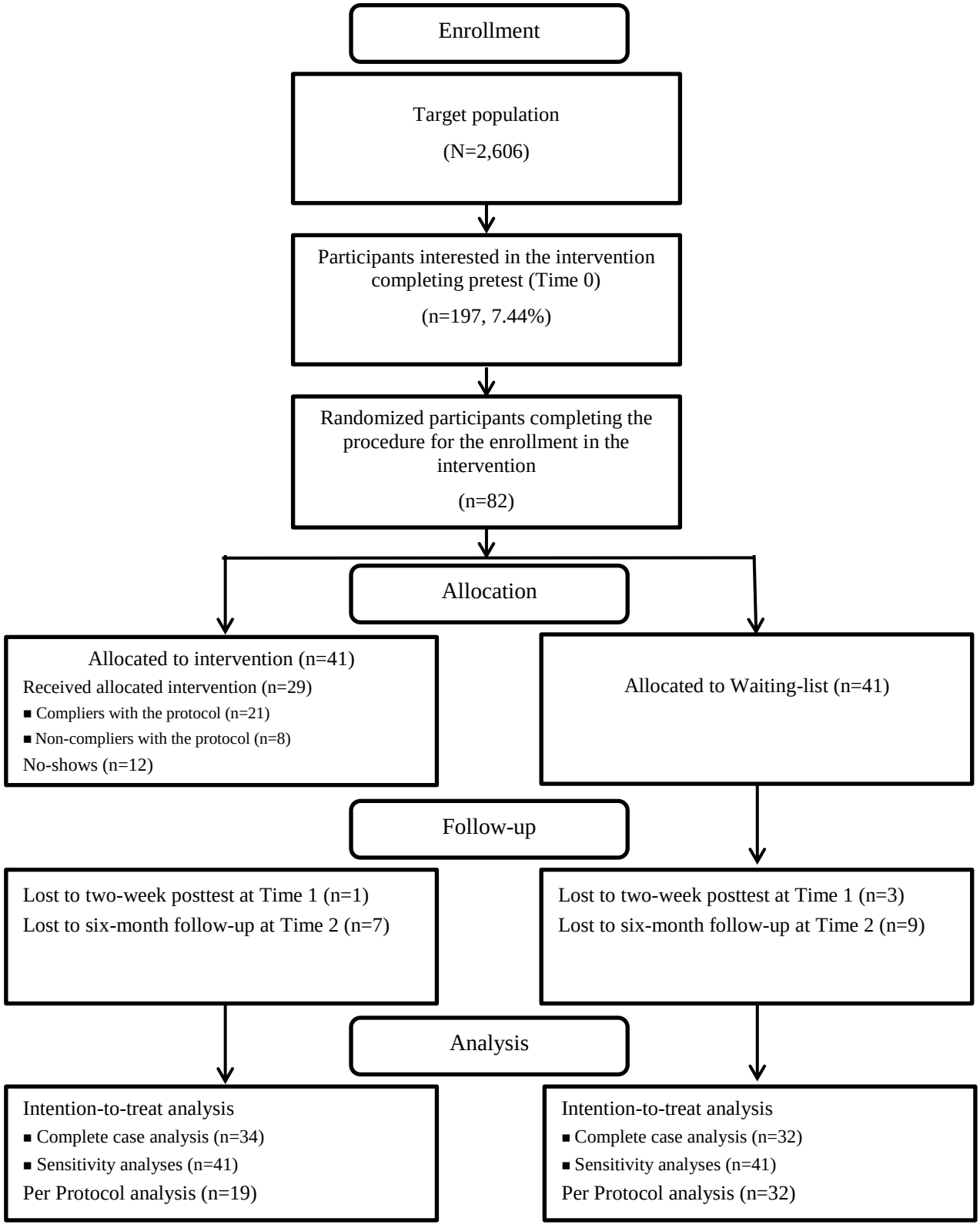

Figure 3.1. Flow diagram of study participants.

In Table 3.1 descriptive statistics and reliability of the measures used in the present study are reported for both all the participants and those specifically included in the RCT sample.

Table 3.1. *Means, standard deviations and reliability of the study measures for entire (n=197) and RCT sample (n=82)*

Study variable	Overall sample (n=197)		RCT sample (n=82)	
	Mean (SD)	α	Mean (SD)	α
Career adaptability (Total score)	92.95 (12.51)	.93	92.64 (13.84)	.95
Concern	22.24 (3.87)	.83	22.11 (4.09)	.84
Control	22.99 (3.73)	.84	22.89 (4.02)	.86
Curiosity	23.50 (3.68)	.85	23.55 (3.98)	.87
Confidence	24.22 (3.89)	.90	24.09 (3.79)	.89
Search for work self-efficacy (Total score)	41.31 (6.03)	.86	41.59 (6.42)	.87
Frustration coping	9.42 (1.73)	.78	9.52 (1.76)	.79
Enterprising exploration	10.69 (2.02)	.82	10.74 (2.20)	.86
Proactive career planning	8.97 (2.47)	.86	8.93 (2.53)	.85
Relational integration	12.23 (1.88)	.77	12.39 (2.09)	.82
Work self-efficacy (Total score)	40.55 (5.65)	.92	39.94 (5.87)	.92
Relational willingness	19.98 (3.29)	.91	19.94 (3.51)	.92
Commitment	20.56 (3.02)	.88	20 (3.04)	.89
Envy	8.79 (3.98)	.83	8.55 (3.95)	.85
Mania	9.00 (3.66)	.62	8.85 (3.56)	.61
True Reparation	20.76 (3.79)	.75	20.65 (3.92)	.75
Manic Reparation	16.46 (4.29)	.76	16.24 (4.18)	.70
Affective investment (Total score)	49.51 (11.49)	.93	48.66 (12.74)	.94
Achievement	13.31 (3.43)	.90	13.21 (3.67)	.92
Affiliation	13.59 (3.28)	.82	13.38 (3.60)	.85
Autonomy	12.16 (3.43)	.86	12.42 (3.09)	.90
Power	10.45 (3.50)	.84	10.57 (3.47)	.85
Job search intensity	19.29 (6.14)	.88	18.44 (6.68)	.90
Job search effort	8.56 (3.70)	.91	8.44 (4.07)	.93
Career satisfaction	9.16 (2.83)	.70	9.28 (2.79)	.69
Job relations satisfaction	15.40 (3.77)	.81	15.59 (3.49)	.79
Job self-promotion	2.93 (1.38)	.46	2.87 (1.40)	.43

3.4.1 External validity of the experiment

In order to investigate the representativeness of our RCT sample and the potential generalizability of the results**,** differences between our RCT sample and the target population in demographic characteristics were tested. The analyses revealed that the participants in our sample were relatively younger than those in the target population of about one and a half years (M=32.09, SD=5.75 in our sample *versus* M=33.62 in the target population), $t(81) = -2.418$, p=.018), whereas no difference was detected on gender (80.5% of females in our sample *versus* 85.3% of females in the target population), $\chi^2(1)=1.460$, p=.227.

The comparison between the participants who completed the required procedure for the enrollment in the career intervention program (n=82) and those who did not (n=115), based on the socio-demographic characteristics, showed that the former included a higher number of males (19.5%) than the latter (9.6%), $\chi^2(1)=4.004$, p<.05. Other slight differences, not significant from a statistical viewpoint, referred to age and being employed as psychologist: those who completed the enrollment were on average older (M=32.09, SD=5.75 versus M=30.75, SD=4.83), $t(195) = 1.769$, p=.078, and employed as psychologists to a lesser extent (20.7% versus 32.2%), $\chi^2(1)=3.150$, p=.076. With regard to the comparison on the examined study variables, those included in the trial overall had lower scores in the sub-dimension of commitment of work self-efficacy (M=20, DS=3.04) than their counterpart (M=20.97, DS=2.96), $t(195) = -2.232$, p<.05. In sum, results reveal that a potential self-selection bias existed with regard to the participation in such a career intervention.

We then performed a logistic regression (using the enter method) to ascertain the effects of these not well balanced variables (i.e. gender, age, psychology employment and commitment) on the likelihood to enroll in the career intervention. Due to the lack of the same data available on the target population and to the voluntary nature of participation in such a program, this analysis had only an exploratory purpose. With regard to the contribution of these variables in predicting the enrollment in the career intervention (Table 3.2), the results revealed that the logistic regression model was statistically significant, $\chi^2(4)=16.45$, $p < .01$. The model explained 10.8% (Nagelkerke R^2) of the variance in enrollment and correctly classified 63.5% of cases. The Wald criterion demonstrated that gender

(p=.034), being employed as psychologist (p=.035) and the commitment dimension of work-self efficacy (p=.031) made a significant contribution to prediction. Male participants and those who were unemployed as psychologists were 2.54 and 0.47 times more likely to enroll in the career intervention, respectively. As well, reduced commitment was associated with an increase in the likelihood to enroll, specifically when commitment score is raised by one unit the odds ratio is 0.9 times as large and therefore participants are 0.9 more times likely to take the intervention offer.

Table 3.2. *Summary of logistic regression analysis for predicting enrollment in the career intervention*

	B	E.S.	Wald	Exp(*B*)	95% CI
Male	0.93	0.44	4.49	2.54*	1.07, 6.04
Age	0.05	0.03	3.54	1.05	1.00, 1.12
Employed as psychologist	-0.75	0.36	4.43	0.47*	0.23, 0.95
Commitment (Work self-efficacy)	-0.11	0.05	4.65	0.90*	0.81, 0.99
Constant	*0.36*				

* p<0.05

3.4.2 Internal validity of the experiment

3.4.2.1 Statistical equivalence between treatment and control group at baseline

With regard to the internal validity of the experiment, the comparison between the treatment and control group across a wide range of observed variables (Table 3.3) after randomization confirmed their substantial equivalence in socio-demographic characteristics of participants with the exception of employment status, because the treatment group included a higher number of employed participants (65.9%) compared with the control group (35.1%), $\chi^2(1)=8.244$, p<.01. As well, treatment group participants showed lower scores in the curiosity dimension of career adaptability (M=22.68, DS=4.07) than their counterpart (M=24.41, DS=3.74), $t(80) = -2.007$, p<.05, thus affecting in turn overall career adaptability albeit not to a statistically significant extent. Therefore, such differences in baseline characteristics should be taken into account in model specifications to estimate the intervention effects in next analyses.

Table 3.3. *Comparison between treatment and control group on socio-demographic and study variables*

	Treatment group	**Control group**		
Socio-demographic qualitative variables	*%*	*%*	*Chi-square (df=1)*	*p*
Gender (female)	75.6	85.4	1.24	.260
Employed	65.9	34.1	8.24	.004
Employed as psychologist	29.3	12.2	3.64	.057
Socio-demographic quantitative variables	*M (SD)*	*M (SD)*	*Student's t (df = 80)*	*p*
Age	32.54 (5.05)	31.63 (6.01)	0.71	.480
Final grade of university degree	106.56 (5.50)	107.20 (3.81)	-0.61	.546
Postgraduate training courses	1 (0.74)	0.83 (0.77)	1.02	.310
Study variables	*M (SD)*	*M (SD)*	*Student's t (df = 80)*	*p*
Career adaptability (Total score)	89.98 (13.55)	95.29 (13.77)	-1.76	.082
Concern	21.44 (4.10)	22.78 (4.01)	-1.50	.138
Control	22.20 (4.07)	23.59 (3.89)	-1.58	.118
Curiosity	22.68 (4.07)	24.41 (3.73)	-2.01	.048
Confidence	23.66 (3.62)	24.51 (3.96)	-1.20	.311
Search for work self-efficacy (Total score)	41.61 (6.29)	41.56 (6.63)	-0.03	.973
Frustration coping	9.61 (1.76)	9.44 (1.78)	0.44	.663
Enterprising exploration	10.78 (2.22)	10.71 (2.22)	0.15	.882
Proactive career planning	8.71 (2.54)	9.15 (2.53)	-0.78	.435
Relational integration	12.51 (2.03)	12.27 (2.17)	0.53	.600
Work self-efficacy (Total score)	39.88 (5.70)	40 (6.09)	-0.09	.926
Relational willingness	20.24 (3.46)	19.63 (3.58)	0.78	.436
Commitment	19.63 (2.85)	20.37 (3.22)	-1.09	.279
Envy	8.51 (3.63)	8.49 (4.30)	0.14	.890
Mania	9 (3.49)	8.71 (3.68)	0.37	.712
True Reparation	20.46 (4.04)	20.83 (3.84)	-0.42	.675

Manic Reparation	15.90 (4.23)	16.59 (4.16)	-0.74	.463
Affective investment (Total score)	47.32 (13.16)	50 (12.32)	-0.95	.344
Achievement	12.88 (3.72)	13.54 (3.64)	-0.81	.420
Affiliation	12.73 (3.66)	14.02 (3.46)	1.64	.104
Autonomy	11.41 (3.88)	12.17 (3.85)	-0.89	.378
Power	10.29 (3.82)	10.27 (3.33)	0.03	.975
Job search intensity	18.63 (6.35)	18.24 (7.06)	0.26	.793
Job search effort	7.88 (4.01)	9.00 (4.10)	-1.25	.214
Career satisfaction	9.44 (2.51)	9.12 (3.08)	0.51	.610
Job relations satisfaction	15.44 (3.59)	15.73 (3.43)	-0.38	.707
Job self-promotion	2.98 (1.44)	2.76 (1.37)	0.71	.482

3.4.2.2 Attrition

Because the estimates of an RCT can be undermined also by attrition, for each measurement time point we examined both the overall attrition rate, intended as the proportion of sample members randomly assigned to the study groups for whom outcome data were not available, and differential attrition rate as the difference in attrition rates between the program and control groups. In particular, whereas response rates were 100% for both treatment and control group in T1, one participant of the treatment group (2.4%) and four participants (9.8%) of the control group did not provide T2 measurements, overall resulting in 6% of attrition rate at post-test. As well, seven participants of the treatment group (17.1%) and nine participants (21.9%) of the control group did not provide T2 measurements, overall resulting in 19.5% of attrition rate at six-month follow-up. In addition, participants providing all the three measurement time points were 66 (equal to 80.5%), respectively 34 for the treatment group and 32 for the control one. The main reasons for dropping out from the study were lack of interest and not having still received the treatment for the control group; whereas no specific reasons were reported by the treatment group. As suggested by Mason (1999), attrition may be regarded as acceptable because in psychological experimental designs nearly 20% of a sample can be expected to withdraw from the study before it is completed. Indeed, rates of attrition vary across the literature for treatment and

subsequent longitudinal studies, with 80% completion rate being a general guideline (Desmond, Maddux, Johnson, & Confer, 1995). Besides, according to What Works Clearinghouse (WWC) standards for attrition in randomized controlled trials (RCTs) (2013), attrition rates in both posttest and follow-up can be considered as low, because under the liberal thresholds, given our overall attrition rates the maximum allowable differential attrition is 10.7 and 10.2 percentage points, respectively. We also checked for selective attrition both in the treatment group and the control group at posttest and follow-up, with regard to some socio-demographic characteristics, i.e. gender, age and employment status. Given the low sample size, we performed non parametric tests, i.e. Fisher's exact test and Mann–Whitney U test, to compare the two groups on qualitative and quantitative variables, respectively. However, at posttest time point we did not find any statistically significant differences between treatment and control group with regard to gender ($p > .999$ and $p > .999$, two-tailed Fisher's exact test, respectively), age ($U = 20$, $p > .999$, $r = .00$, and $U = 43$, $p = .143$, $r = .21$, respectively), and employment status ($p = .341$ and $p > .999$, two-tailed Fisher's exact test, respectively). Similar results emerged at follow-up about differences by gender ($p = .332$ and $p = .597$, two-tailed Fisher's exact test, respectively), age ($U = 111$, $p = .781$, $r = .04$, and $U = 132$, $p = .704$, $r = .06$, respectively), and employment status ($p = .673$ and $p = .692$ two-tailed Fisher's exact test, respectively). Overall, we may thus conclude that relevant attrition bias does not exist in the present study.

3.4.2.3 Compliance

In RCTs non-compliance, in terms of non-adherence with the assigned treatment according to the protocol and dropping out from the intervention, represents a major threat to correctly estimating intervention effects, because it potentially leads to loss of statistical power, self-selection bias and lower generalizability. Overall, 100% of control group participants in our study complied with their assigned condition. This was also checked inspecting potential contaminations in T2 and T3 measurement time points, by asking them whether they had participated in similar career interventions or comparable initiatives held by other agencies or institutions in the meantime. With regard to the treatment group, 29.3% of participants were no-shows because they did not initiate the intervention despite having been enrolled in it, whereas 51.2% of them were adequately treated, thus complying

with at least 80% of the intervention according to protocol. Specifically, 2.4% of participants completed only one session, 9.8% two sessions, 7.3% three sessions, 31.7% four sessions, and 19.5% all the five sessions. The main reasons reported by no-shows were family problems, pregnancy, moving to another city, and work commitments; whereas the reasons for non-compliance mainly were related to work commitments and lack of interest in the program. Further analyses were performed to examine potential differences based on observed variables between compliers and non-compliers (including also no-shows) in the treatment group, but any statistically significant difference emerged (Table 3.4). This seems to suggest the randomness of non-compliance and the lack of a self-selection bias in completing the career intervention based on the observed variables. Despite the lack of clear references to non-compliance rates in RCTs regarding career counseling and guidance fields, the percentage found in our study (equal to 48.8%) may pose serious threats to validity, given the rule of thumb that up to 20% of dropout from the intervention during a trial can be considered acceptable (Furlan, Pennick, Bombardier, & Tulder, 2009). Therefore, it may be necessary to use analysis strategies which are able to address this problem in estimating the intervention effects.

Table 3.4. *Comparison between compliers and non-compliers on socio-demographic and study variables*

	Compliers (n=21)	**Non-compliers (n=20)**		
Socio-demographic qualitative variables	*%*	*%*	*Chi-square (df=1)*	*p*
Gender (female)	85.7	65	2.38	.123
Employed	61.9	70	0.30	.585
Employed as psychologist	19	40	2.17	.141
Socio-demographic quantitative variables	*M (SD)*	*M (SD)*	*Student's t (df = 39)*	*p*
Age	32.90 (6.88)	32.15 (3.70)	0.44*	.663
Final grade of university degree	107.14 (4.76)	105.95 (6.25)	0.69	.495
Postgraduate training courses	0.81 (0.75)	1.20 (0.70)	-1.73	.092
Study variables	*M (SD)*	*M (SD)*	*Student's t (df = 39)*	*p*
Career adaptability (Total score)	89.52 (13.17)	90.45 (14.25)	-0.22	.830

Concern	21.10 (4.40)	21.80 (3.83)	-0.54	.589
Control	22.10 (3.37)	22.30 (4.78)	-0.16	.874
Curiosity	22.43 (4.57)	22.95 (3.58)	-0.41	.687
Confidence	23.90 (3.30)	23.40 (3.99)	0.44	.661
Search for work self-efficacy (Total score)	40.57 (6.35)	42.70 (6.19)	-1.09	.284
Frustration coping	9.24 (2.05)	10.00 (1.34)	-1.40	.169
Enterprising exploration	10.38 (2.09)	11.20 (2.33)	-1.19	.242
Proactive career planning	8.43 (2.29)	9.00 (2.81)	-0.71	.479
Relational integration	12.52 (2.23)	12.50 (1.85)	0.04	.971
Work self-efficacy (Total score)	40.05 (6.35)	39.70 (6.19)	0.19	.848
Relational willingness	20.33 (3.43)	20.15 (3.59)	0.17	.868
Commitment	19.71 (2.88)	19.55 (2.89)	0.18	.856
Envy	8.76 (3.49)	8.45 (3.85)	0.27	.787
Mania	9.52 (3.59)	8.45 (3.38)	0.99	.330
True Reparation	20.90 (4.04)	20.00 (4.09)	0.71	.480
Manic Reparation	16.62 (4.71)	15.15 (3.63)	1.11	.272
Affective investment (Total score)	46.23 (15.26)	48.25 (10.85)	-0.44	.663
Achievement	12.52 (4.45)	13.25 (2.83)	-0.63*	.535
Affiliation	12.57 (4.20)	12.90 (3.09)	-0.28	.778
Autonomy	11.14 (3.86)	11.70 (3.97)	-0.45	.652
Power	10.19 (4.51)	10.40 (3.03)	-0.17*	.862
Job search intensity	17.38 (6.57)	19.95 (6.00)	-1.31	.199
Job search effort	7.52 (4.18)	8.25 (3.89)	-0.57	.569
Career satisfaction	9.62 (2.27)	9.25 (2.79)	0.47	.644
Job relations satisfaction	15.24 (4.16)	15.65 (2.98)	-0.37	.719
Job self-promotion	2.81 (1.60)	3.15 (1.27)	-0.75	.456

*Adjusted degrees of freedom due to equal variance not assumed: degrees of freedom are 31.01 for Age, 34.11 for Achievement and 35.15 for Power, respectively.

3.4.3 The intervention effects

Consistently with the strategy of analysis adopted in the present study, illustrated in Figure 3.2, the intervention effects are separately reported for Intention-to-treat analysis and Per Protocol analysis as follows.

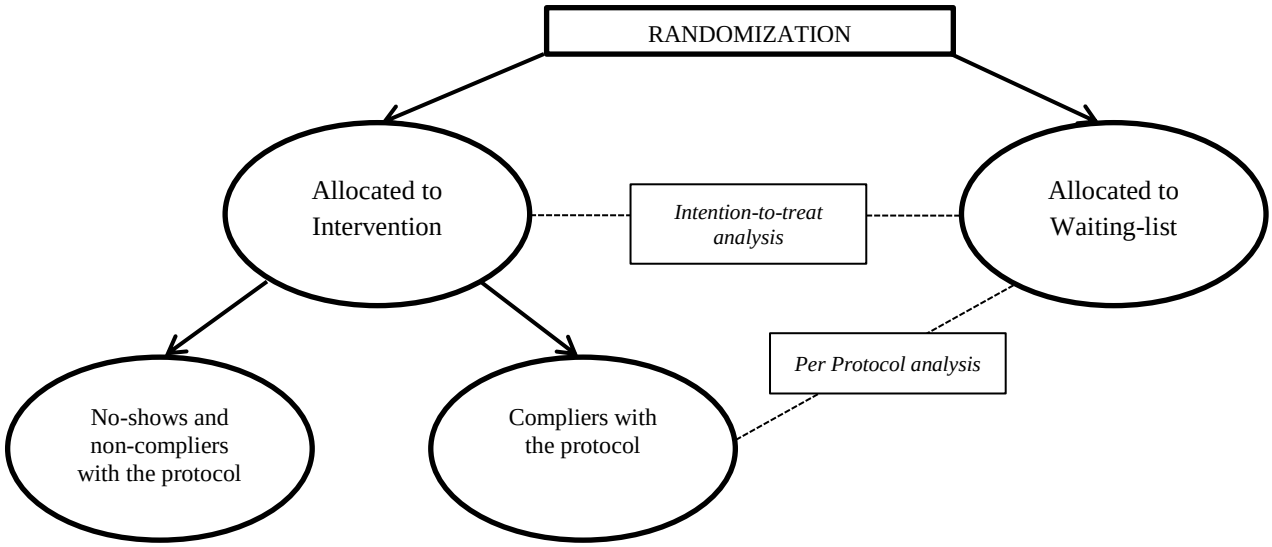

Figure 3.2. Strategy of analysis

3.4.3.1 Intention-to-treat (ITT) analysis

Detailed information about the mean scores and standard deviations of the study main outcomes across different time points can be found in Table 3.5. In estimating the effectiveness of the career intervention, difference on employment status between the two groups at baseline was taken into account as covariate in the model, given its importance as socio-demographic characteristic of participants that may have a role in benefiting from the career program. Instead, the curiosity dimension of career adaptability, albeit lower in the treatment group to a statistically significant extent, was not added to the model because the repeated measures design controls for potential confounders. As reported above, only large effects can be thus observed based on the statistical significance of the estimates, therefore effects sizes are provided in order to test whether the differences between the treatment and control group are large enough to be of value in a practical sense. In regard with this, given the lower number of participants completing all three measurement time points (n=66), to ensure power of .80, α error probability of .05 and nonsphericity correction ε of 1, the sensitivity analyses

required an effect size of at least .025 (partial η2) for the interaction effect (2 groups x 3 measurements), which increases to partial η2 of .030 for T1-T2 and T1-T3 contrasts). In order to guarantee enough power to reject the null hypothesis, when results are not statistically significant, we consider as potentially relevant in practical sense the interactions - as well as the respective contrasts – that in complete case analysis achieve the required effect size thresholds. In addition, sensitivity analyses carried out according to LOC and MI methods are used to further prove the robustness of the results found in complete case analysis, based on the generally recommended norms for partial eta-squared (small = 0.01; medium = 0.06; large = 0.14.).

Table 3.5. *Means and standard deviations of the study main outcomes*

	Pretest		**Posttest**		**Follow-up**	
	TG	**CG**	**TG**	**CG**	**TG**	**CG**
	(n=41)	**(n=41)**	**(n=40)**	**(n=37)**	**(n=34)**	**(n=32)**
Outcome	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*
Career Adaptability (Total score)	89.71 (13.58)	94.84 (12.81)	89 (14.22)	93.25 (14.05)	91.32 (14.94)	94.38 (13.92)
Concern	21.44 (4.10)	22.78 (4.01)	21.30 (4.30)	22.54 (3.72)	21.74 (4.00)	22.56 (3.64)
Control	22.20 (4.07)	23.59 (3.89)	21.65 (4.61)	22.89 (3.53)	24.47 (4.97)	23.72 (5.85)
Curiosity	22.68 (4.07)	24.41 (3.73)	22.27 (3.97)	23.76 (4.22)	22.88 (4.12)	23.56 (4.29)
Confidence	23.66 (3.62)	24.51 (3.96)	24.10 (3.40)	24.65 (3.30)	24.24 (4.16)	24.53 (4.02)

Note: TG=Treatment Group, CG=Control Group.

Respect to the effects of the career intervention on the main outcome measures (Table 3.6), looking at the overall career adaptability, no interaction effect is detected between group condition and time, $F(2, 63) = 0.57$, $p = .568$, $\eta p^2 = .009$. However, the examination of the estimated marginal means and the interaction graph (Figure 3.3) seems to suggest a general growth trend from pretest to follow-up, indicating improvement for the treatment group equal to 2.04 points compared to a mean difference of -.92 for the control group. The only career adaptability dimension which seems to be affected by the intervention over time is curiosity, $F(2, 63) = 1.92$, $p = .150$, $\eta p^2 = .030$, as also confirmed by the sensitivity analyses. In particular, looking at the contrasts, a close-to-medium positive effect for the

treatment group emerges on the long-run, F(1, 63) = 3.98, p = .049, ηp^2=.059, which becomes statistically significant at p<.05 in both complete case and LOCF analyses. Based on estimated marginal means, the pretest-follow-up increase for the treatment group is equal to 0.76 points, compared to a mean difference of -.96 of the control group (Figure 3.4).

Table 3.6. *Results for repeated-measure ANOVAs comparing responses to primary outcomes measures before and after the career intervention, and at six-month follow-up in intention-to-treat (ITT) analysis*

	Main interaction (Time x Condition)			T1 to T2 (pre to post)			T1 to T3 (pre to follow-up)		
Complete case analysis									
Outcome	F(2, 63)	p	ηp2	F(1, 63)	p	ηp2	F(1, 63)	p	ηp2
Career adaptability	0.57	.568	.009	0.22	.643	.003	1.45	.233	.022
Concern	0.43	.650	.007	0.32	.576	.005	0.88	.353	.014
Control	0.03	.976	.001	0.00	.965	.000	0.05	.830	.001
Curiosity	1.92	.150	.030	0.44	.509	.007	3.98	.049*	.059
Confidence	0.25	.780	.004	0.04	.842	.001	0.52	.475	.008
LOCF analysis									
Outcome	F(2, 79)	p	ηp2	F(1, 79)	p	ηp2	F(1, 79)	p	ηp2
Career adaptability	1.03	.359	.013	0.68	.411	.009	2.36	.129	.029
Concern	0.42	.660	.005	0.27	.606	.003	0.80	.374	.010
Control	0.12	.891	.001	0.21	.650	.003	0.10	.752	.001
Curiosity	2.16	.119	.027	0.73	.397	.009	4.40	.039*	.053
Confidence	0.86	.426	.011	0.73	.395	.009	1.74	.191	.022
Multiple Imputation analysis									
Outcome	F(2, 79)	p	ηp2	F(1, 79)	p	ηp2	F(1, 79)	p	ηp2
Career adaptability	0.56	.616	.007	0.50	.520	.006	1.13	.445	.014
Concern	0.86	.489	.011	0.08	.815	.001	1.52	.279	.019
Control	0.35	.761	.004	0.30	.646	.004	0.14	.803	.002
Curiosity	1.76	.296	.022	0.52	.523	.007	3.36	.160	.040
Confidence	0.61	.601	.008	0.58	.500	.007	0.98	.439	.012

Note: The estimated models include employment status as covariate. *Statistically significant at p<.05 level.

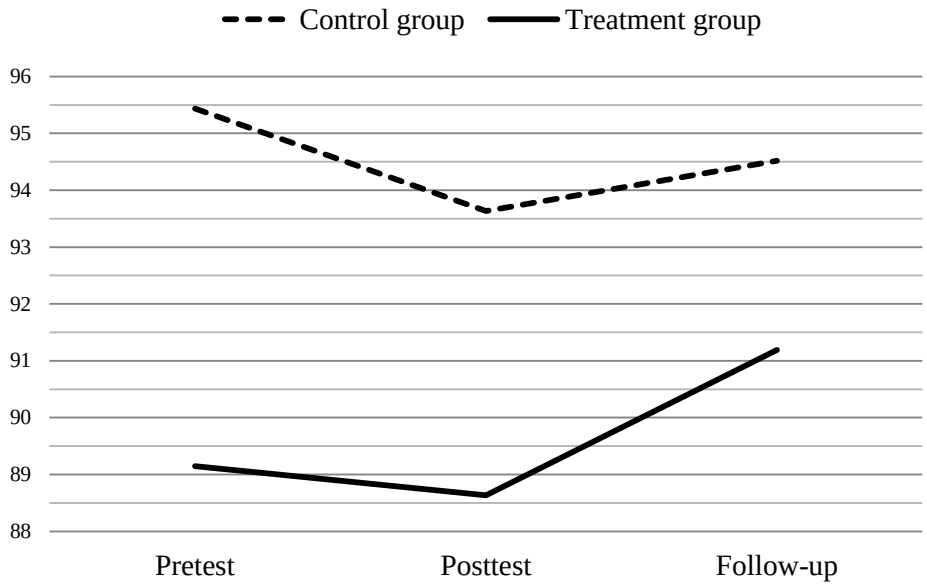

Figure 3.3. Estimated marginal means representing the Time X Group condition interaction on career adaptability

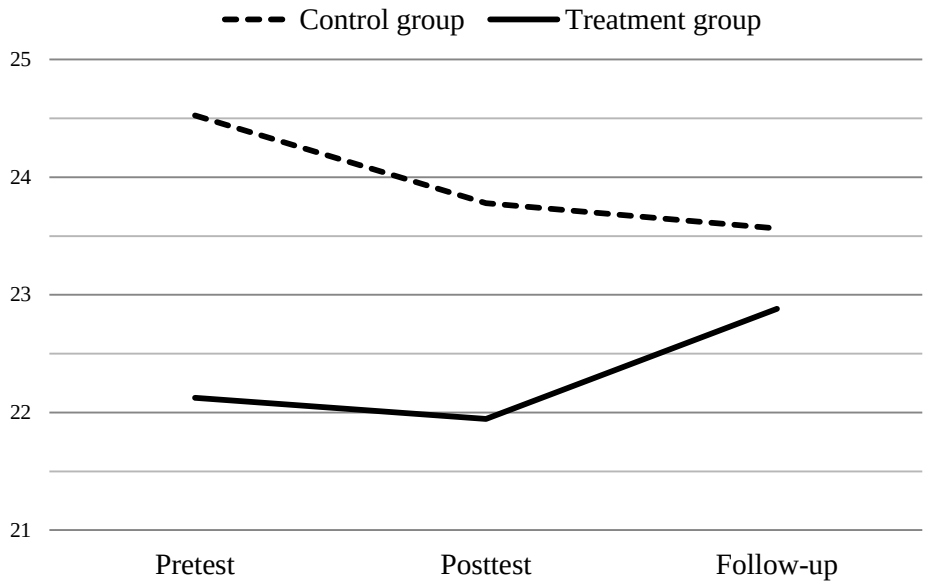

Figure 3.4. Estimated marginal means representing the Time X Group condition interaction on curiosity

Mean scores and standard deviations of the study secondary outcomes across different time points are reported in Table 3.7. Looking at the effects of the intervention on such outcomes (Table 3.8), no statistically significant interaction emerges between group condition and time. However, we consider as potentially relevant in practical sense the interactions - as well as the respective contrasts - achieving

the required effect size thresholds discussed above. From this perspective, there are two small effects on proactive career planning (sub-dimension of search for work self-efficacy), F(2, 63) = 1.88, p = .157, ηp^2=.029, and on job search intensity, F(2, 63) = 1.72, p = .183, ηp^2=.027. Specifically, a long-term effect is detected on proactive career planning F(1, 63) = 3.24, p = .077, ηp^2=.049, with the treatment group participants having higher improvements (Mean diff = 1) compared to the control group (Mean diff = -.06). Instead, job search intensity seems to decrease on both short term, F(1, 63) = 2.63, p = .110, ηp^2=.040, and long term, F(1, 63) = 2.14, p = .148, ηp^2=.033, with mean differences of. -.85 and -1.98 for the treatment group and of 1.25 and .17 for the control group, after the intervention and at six-month follow-up respectively.

Table 3.7. *Means and standard deviations of the study secondary outcomes*

	Pretest		**Posttest**		**Follow-up**	
	TG	**CG**	**TG**	**CG**	**TG**	**CG**
	(n=41)	**(n=41)**	**(n=40)**	**(n=37)**	**(n=34)**	**(n=32)**
Outcome	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*
Search for work self-efficacy (Total score)	41.61 (6.29)	41.56 (6.63)	41.05 (6.56)	41.59 (7.48)	42.71 (6.35)	42.25 (8.10)
Frustration coping	9.61 (1.76)	9.44 (1.78)	9.55 (1.77)	9.68 (2.01)	9.82 (1.83)	9.91 (2.05)
Enterprising exploration	10.78 (2.22)	10.71 (2.22)	10.60 (2.24)	10.62 (2.46)	10.88 (2.16)	10.78 (2.70)
Proactive career planning	8.71 (2.54)	9.15 (2.53)	8.80 (2.51)	9.22 (2.76)	9.50 (2.79)	9.44 (2.75)
Relational integration	12.51 (2.03)	12.27 (2.17)	12.10 (2.07)	12.08 (2.03)	12.50 (2.23)	12.13 (2.34)
Work self-efficacy (Total score)	39.88 (5.70)	40 (6.09)	40.43 (5.86)	41.81 (6.22)	40.15 (4.51)	40.53 (5.92)
Relational willingness	20.24 (3.46)	19.63 (3.58)	20.50 (3.32)	20.65 (3.44)	19.97 (2.98)	20.50 (3.52)
Commitment	19.63 (2.85)	20.37 (3.22)	19.93 (3.17)	21.16 (3.24)	20.18 (2.19)	20.03 (2.89)
Envy	8.51 (3.63)	8.49 (4.30)	9.50 (3.70)	8.73 (3.97)	9.32 (3.72)	8.69 (4.25)
Mania	9.00 (3.49)	8.71 (3.68)	9.85 (3.36)	8.92 (3.29)	8.62 (3.68)	8.50 (3.98)
True Reparation	20.46 (4.04)	20.83 (3.84)	20.28 (3.70)	20.00 (3.32)	21.44 (3.27)	20.56 (4.35)
Manic Reparation	15.90 (4.23)	16.59 (4.16)	15.63 (4.69)	16.59 (4.22)	16.00 (5.32)	16.91 (3.73)
Affective investment (Total score)	47.3 (13.16)	50 (12.32)	47.3 (12.26)	50.7 (10.44)	49.9 (11.92)	51.3 (10.10)
Achievement	12.88 (3.72)	13.54 (3.64)	12.38 (3.91)	13.51 (2.84)	13.91 (3.02)	14.66 (2.68)
Affiliation	12.73 (3.66)	14.02 (3.46)	13.23 (3.09)	14.27 (2.82)	13.03 (3.26)	13.56 (2.79)

Autonomy	11.41 (3.88)	12.17 (3.85)	12.18 (3.63)	12.32 (3.75)	12.59 (3.47)	12.56 (3.44)
Power	10.29 (3.82)	10.27 (3.33)	9.58 (3.66)	10.62 (3.62)	10.41 (3.99)	10.56 (3.23)
Job search intensity	18.63 (6.35)	18.24 (7.06)	18.05 (6.10)	19.00 (6.71)	16.50 (6.37)	18.09 (7.09)
Job search effort	7.88 (4.01)	9.00 (4.10)	7.45 (3.31)	8.08 (3.75)	6.94 (3.69)	7.59 (3.77)
Career satisfaction	9.44 (2.51)	9.12 (3.08)	10.98 (2.62)	10.00 (3.46)	NA	NA
Job relations satisfaction	15.44 (3.59)	15.73 (3.43)	15.13 (3.01)	15.08 (4.48)	NA	NA
Job self-promotion	2.98 (1.44)	2.76 (1.37)	3.13 (1.42)	3.03 (1.36)	3.41 (1.19)	3.44 (1.37)

Note: NA= Career satisfaction and Job relations satisfaction were not examined at 6-month follow-up.

Table 3.8. *Results for repeated-measure ANOVAs comparing responses to secondary outcomes measures before and after the career intervention, and at six-month follow-up in intention-to-treat (ITT) analysis*

	Main interaction (Time x Condition)			T1 to T2 (pre to post)			T1 to T3 (pre to follow up)		
Complete case analysis									
Outcome	F(2, 63)	p	ηp2	F(1, 63)	p	ηp2	F(1, 63)	p	ηp2
Search for work self-efficacy (Total score)	0.40	.673	.006	0.02	.880	.000	0.41	.522	.007
Frustration coping	0.02	.981	.000	0.02	.894	.000	0.00	.960	.000
Enterprising exploration	0.15	.858	.002	0.27	.606	.004	0.17	.683	.003
Proactive career planning	1.88	.157	.029	0.79	.377	.012	3.24	.077	.049
Relational integration	1.06	.350	.017	2.27	.137	.035	.371	.545	.006
Work self-efficacy (Total score)	1.19	.308	.019	2.63	.110	.040	0.76	.387	.012
Relational willingness	1.48	.231	.023	1.99	.163	.031	2.57	.114	.039
Commitment	1.29	.279	.020	1.87	.186	.029	0.01	.917	.000
Envy	0.68	.509	.011	0.87	.354	.014	1.19	.278	.019
Mania	0.55	.576	.009	1.07	.306	.017	0.02	.885	.000
True Reparation	0.37	.690	.006	0.57	.453	.009	0.53	.468	.008
Manic Reparation	0.27	.763	.004	0.13	.723	.002	0.51	.478	.008
Affective investment (Total score)	0.51	.603	.008	0.07	.793	.001	0.46	.500	.007
Achievement	0.41	.664	.006	0.43	.515	.007	0.06	.802	.001
Affiliation	0.61	.546	.010	0.29	.593	.005	1.02	.316	.016
Autonomy	0.73	.487	.011	1.09	.300	.017	1.11	.296	.017
Power	1.90	.154	.029	2.91	.093	.044	0.00	.973	.000
Job search intensity	1.72	.183	.027	2.63	.110	.040	2.14	.148	.033
Job search effort	0.02	.977	.000	0.99	.996	.000	0.03	.866	.000
Career satisfaction	1.22	.272	.016						

Job relations satisfaction	0.09	.767	.001						
Job self-promotion	1.10	.335	.018	0.08	.783	.001	1.85	.281	.019

LOCF analysis

Outcome	F(2, 79)	p	ηp2	F(1, 79)	p	ηp2	F(1, 79)	p	ηp2
Search for work self-efficacy (Total score)	0.43	.669	.005	0.07	.775	.001	0.30	.588	.004
Frustration coping	0.03	.968	.000	0.01	.934	.000	0.03	.868	.000
Enterprising exploration	0.00	.996	.000	0.00	.949	.000	0.00	.962	.000
Proactive career planning	1.01	.367	.013	0.06	.799	.001	1.48	.228	.018
Relational integration	0.42	.665	.005	0.59	.445	.007	0.00	.986	.000
Work self-efficacy (Total score)	0.64	.530	.008	1.24	.269	.015	0.29	.590	.004
Relational willingness	0.73	.484	.009	0.79	.376	.010	1.19	.278	.015
Commitment	0.97	.382	.012	1.17	.283	.015	0.02	.878	.000
Envy	2.32	.102	.029	2.87	.094	.035	3.54	.063	.043
Mania	2.47	.087	.030	3.22	.077	.039	0.87	.353	.011
True Reparation	0.17	.822	.002	0.17	.677	.002	0.26	.613	.003
Manic Reparation	0.25	.780	.003	0.73	.788	.001	0.67	.416	.008
Affective investment (Total score)	0.49	.615	.006	0.05	.832	.001	0.45	.504	.006
Achievement	0.45	.637	.006	0.51	.478	.006	0.04	.836	.001
Affiliation	0.69	.489	.009	0.33	.570	.004	1.12	.292	.015
Autonomy	0.35	.708	.004	0.43	.515	.005	0.50	.482	.006
Power	1.52	.222	.019	1.79	.185	.022	0.06	.802	.001
Job search intensity	1.15	.316	.014	1.53	.220	.019	1.49	.225	.019
Job search effort	0.12	.983	.003	0.01	.929	.000	0.00	.956	.000
Career satisfaction	1.47	.229	.018						
Job relations satisfaction	0.07	.797	.001						
Job self-promotion	1.16	.317	.014	0.02	.879	.000	1.66	.201	.021

Multiple Imputation analysis

Outcome	F(2, 79)	p	ηp2	F(1, 63)	p	ηp2	F(1, 63)	p	ηp2
Search for work self-efficacy (Total score)	1.03	.479	.013	0.13	.772	.002	1.08	.380	.013
Frustration coping	0.22	.813	.003	0.08	.800	.001	0.29	.653	.004
Enterprising exploration	0.45	.700	.006	0.15	.734	.002	0.36	.666	.005
Proactive career planning	1.91	.240	.023	0.20	.718	.003	3.14	.131	.038
Relational integration	0.46	.666	.006	0.28	.638	.004	0.73	.514	.009
Work self-efficacy (Total score)	0.77	.513	.010	1.09	.346	.013	0.46	.672	.006
Relational willingness	1.26	.346	.016	1.08	.326	.014	2.31	.273	.028
Commitment	1.62	.247	.020	0.85	.389	.011	0.85	.430	.011

Envy	1.47	.242	.018	2.53	.123	.031	1.57	.298	.019
Mania	1.47	.261	.018	2.38	.135	.029	0.39	.674	.005
True Reparation	0.24	.801	.003	0.17	.712	.002	0.33	.640	.004
Manic Reparation	0.19	.836	.002	0.18	.728	.002	0.26	.692	.003
Affective investment (Total score)	0.35	.750	.004	0.24	.677	.003	0.22	.752	.003
Achievement	0.49	.648	.006	0.89	.399	.011	0.08	.794	.001
Affiliation	0.15	.870	.002	0.12	.770	.002	0.20	.716	.003
Autonomy	0.40	.678	.005	0.35	.613	.004	0.70	.482	.009
Power	0.73	.492	.009	1.50	.231	.019	0.25	.701	.003
Job search intensity	1.18	.329	.015	2.45	.031	.030	0.98	.386	.012
Job search effort	0.17	.854	.002	0.06	.829	.001	0.15	.740	.002
Career satisfaction	1.25	.291	.016						
Job relations satisfaction	0.05	.844	.001						
Job self-promotion	0.43	.688	.005	0.23	.671	.003	0.65	.545	.008

Note: The estimated models include employment status as covariate.

3.4.3.2 Per protocol (PP) analysis

Considering the total number of participants included in the PP analysis (n=51), to ensure a power of .80, given α error probability of .05 and nonsphericity correction ε of 1, the sensitivity analyses required an effect size of at least .032 (partial $\eta 2$) for the interaction effect (2 groups x 3 measurements), which increases to partial $\eta 2$ of .039 for T1-T2 and T1-T3 contrasts. Consistently, we consider the practical significance of the results only when the main interaction effects and the relative contrasts show proven robustness to achieve the required effect size thresholds.

Looking at the interaction effect on the main outcomes (Table 3.9), no significant interaction is detected for the overall score of career adaptability (Figure 3.5), whereas an interaction (albeit not statistically significant) effect emerges for curiosity, $F(2, 48) = 2.17$, $p = .120$, $\eta p^2 = .043$. Specifically, as highlighted by contrasts, there is a statistically significant difference between treated and control group at six-month follow-up, $F(1, 48) = 4.11$, $p = .048$, $\eta p^2 = .079$. Based on estimated marginal means, the pretest-follow-up increase for the treated group is equal to 1.26 points compared to a mean difference of -.90 of the control group, thus revealing a medium effect (Figure 3.6).

Table 3.9. *Results for repeated-measure ANOVAs comparing responses to primary outcomes measures before and after the career intervention, and at six-month follow-up in Per Protocol (PP) analysis*

	Main interaction (Time x Condition)			T1 to T2 (pre to post)			T1 to T3 (pre to follow- up)		
Outcome	F(2, 48)	p	ηp2	F(1, 48)	p	ηp2	F(1, 48)	p	ηp2
Career adaptability	0.49	.615	.010	0.00	.952	.000	0.89	.350	.018
Concern	0.01	.991	.000	0.00	.955	.000	0.02	.888	.000
Control	0.09	.914	.002	0.14	.710	.003	0.00	.965	.000
Curiosity	2.17	.120	.043	0.12	.732	.002	4.11	.048	.079
Confidence	0.32	.726	.007	0.04	.837	.001	0.35	.557	.007

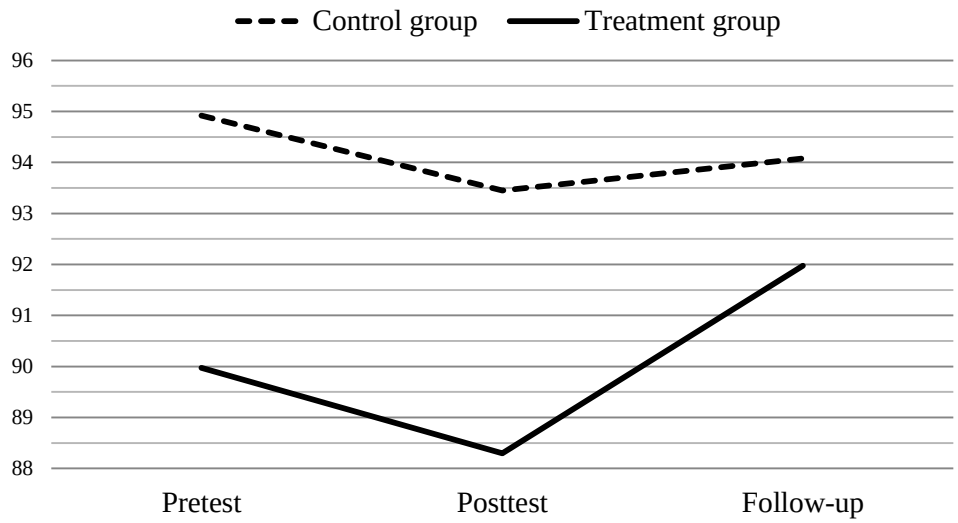

Figure 3.5. Estimated marginal means representing the Time X Group condition interaction on career adaptability

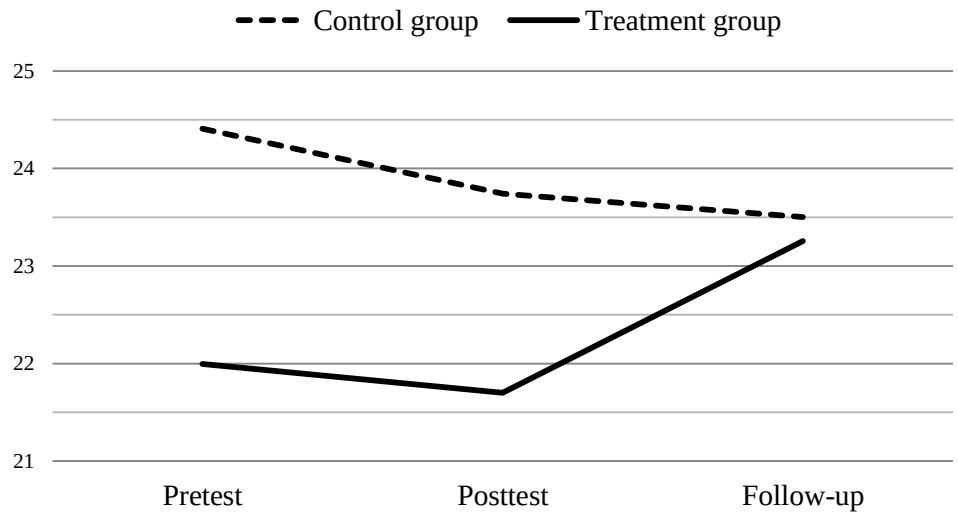

Figure 3.6. Estimated marginal means representing the Time X Group condition interaction on curiosity

With regard to the secondary outcomes (Table 3.10), two statistically significant interaction effects emerge with regard to job search intensity, $F(2, 48) = 3.40$, $p = .045$, $\eta p^2 = .066$, and affiliation, $F(2, 48) = 3.71$, $p = .028$, $\eta p^2 = .072$. In detail, job search intensity decreases over time in the treated group, to a statistically significant extent on the short term, $F(1, 48) = 6.16$, $p = .017$, $\eta p^2 = .114$, and to a practically significant extent on the long term, $F(1, 48) = 3.49$, $p = .068$, $\eta p^2 = .068$. Looking at the estimated marginal means in the short run, the mean difference is -2.27 points for the treated group and 1.04 for the control group; whereas, in the long run, the mean difference is -3.10 points for the treated group and .09 for the control group (Figure 3.7). Whereas, affiliation tends to significantly increase in the treated group at the six-month follow-up, $F(1, 48) = 5.80$, $p = .020$, $\eta p^2 = .108$, with a mean difference of 2.51 points, compared to a mean difference of .016 for the control group (Figure 3.8).

Other relevant interaction effects (albeit not statistically significant at $p<.05$) are reported as follows. In detail, the interaction effect on affective investment, $F(2, 48) = 2.53$, $p = .085$, $\eta p^2 = .050$, shows an increase from pretest to follow-up in the treated group, $F(1, 48) = 3.87$, $p = .055$, $\eta p^2 = .075$, with a mean difference of 6.61 points compared to a mean difference of .04 of the control group. Also the interaction effect on autonomy, $F(2, 48) = 2.68$, $p = .074$, $\eta p^2 = .053$, reveals increases on both short term, $F(1, 48) = 3.32$, $p = .075$, $\eta p^2 = .065$ (mean diff = 1.51 for the treated group; mean diff= -.43 for the control group), and to a statistically significant extent on long term, $F(1, 48) = 5.48$, $p = .023$, $\eta p^2 = .102$ (mean diff = 1.97 for the treated group; mean diff= .05 for the control group). Instead, the interaction effects on work-self efficacy, $F(2, 48) = 1.74$, $p = .132$, $\eta p^2 = .035$, and the commitment dimension, $F(2, 48) = 2.27$, $p = .109$, $\eta p^2 = .045$, show lower scores in the treated group on short term. Specifically, mean differences on work self-efficacy is equal to -1.42 and 1.52 points for the treated and control group, respectively, $F(1, 48) = 3.60$, $p = .064$, $\eta p^2 = .070$; with the sub-dimension of commitment being particularly affected, $F(1, 48) = 2.73$, $p = .105$, $\eta p^2 = .054$, with the treated group having a mean difference of -.48 points, compared to .79 points in the control group. There are other substantive interaction effects on proactive career planning, $F(2, 48) = 1.66$, $p = .195$, $\eta p^2 = .034$, and manic reparation, $F(2, 48) = 1.64$, $p = .198$, $\eta p^2 = .033$. Specifically, proactive career planning increases in the treated group on long term, $F(1, 48) = 1.97$, $p = .167$, $\eta p^2 = .039$, with a mean difference of .98 points

compared to .01 points in the control group; whereas manic reparation decreases on long term F(1, 48) = 3.16, p = .082, ηp^2=.062, revealing a mean difference of -1.65 points in the treated group and of 0.73 in the control group. Then, an interaction effect emerges also for power which is close to statistical significance, F(2, 48) = 3.00, p = .055, ηp^2=.059; however, no relevant effects are detected on contrasts. In this regard, further examination of estimated marginal means and interaction graph reveals a mean difference between posttest and follow-up, which is out of the focus of the study on short and long term intervention effects.

Table 3.10. *Results for repeated-measure ANOVAs comparing responses to secondary outcomes measures before and after the career intervention, and at six-month follow-up in Per Protocol (PP) analysis*

	Main interaction (Time x Condition)			T1 to T2 (pre to post)			T1 to T3 (pre to follow up)		
Outcome	F(2, 48)	p	ηp2	F(1, 48)	p	ηp2	F(1, 48)	p	ηp2
Search for work self-efficacy (Total score)	0.69	.502	.014	0.84	.364	.017	0.02	.886	.000
Frustration coping	0.93	.399	.019	0.94	.336	.019	0.11	.736	.002
Enterprising exploration	0.03	.967	.001	0.07	.793	.001	0.00	.962	.000
Proactive career planning	1.66	.195	.034	0.03	.863	.001	1.97	.167	.039
Relational integration	1.49	.230	.030	2.51	.120	.050	1.93	.171	.039
Work self-efficacy (Total score)	1.74	.132	.035	3.60	.064	.070	0.33	.566	.007
Relational willingness	1.40	.253	.028	2.40	.128	.048	1.79	.138	.036
Commitment	2.27	.109	.045	2.73	.105	.054	0.14	.712	.003
Envy	1.03	.362	.021	0.00	.959	.000	1.49	.228	.030
Mania	0.28	.756	.006	0.56	.456	.012	0.29	.594	.006
True Reparation	0.14	.873	.003	0.10	.752	.002	0.05	.828	.001
Manic Reparation	1.64	.198	.033	1.50	.227	.030	3.16	.082	.062
Affective investment (Total score)	2.53	.085	.050	0.15	.698	.003	3.87	.055	.075
Achievement	1.15	.322	.023	0.12	.733	.002	1.06	.307	.022
Affiliation	3.71	.028	.072	1.22	.274	.025	5.80	.020	.108
Autonomy	2.68	.074	.053	3.32	.075	.065	5.48	.023	.102
Power	3.00	.055	.059	1.73	.195	.035	1.07	.306	.022

Job search intensity	3.40	.045	.066	6.16	.017	.114	3.49	.068	.068
Job search effort	0.41	.665	.008	0.95	.335	.019	0.28	.598	.006
Career satisfaction	0.40	.531	.008						
Job relations satisfaction	0.93	.340	.019						
Job self-promotion	0.23	.793	.005	0.40	.531	.009	0.28	.601	.006

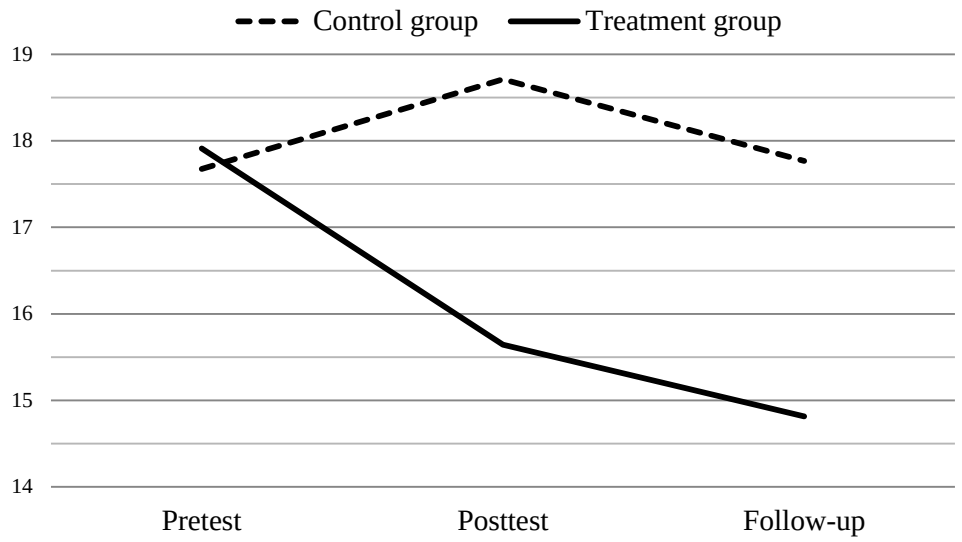

Figure 3.7. Estimated marginal means representing the Time X Group condition interaction on job search intensity (Per Protocol analysis)

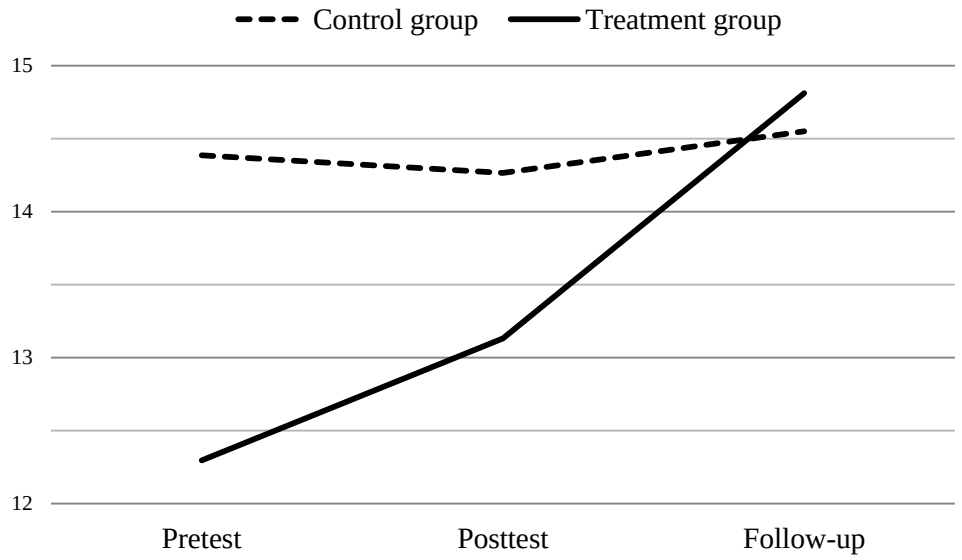

Figure 3.8. Estimated marginal means representing the Time X Group condition interaction on affiliation (Per Protocol analysis)

3.5 Discussion

The present study aimed at evaluating the effectiveness of a psychodynamic career intervention, consisting in a five-session group career counseling, on Italian adult psychology professionals entering the labor market. An experimental study with three measurement time points (pretest, posttest after the intervention, follow-up after six month) was conducted to assess the effects of the intervention on career adaptability as primary outcome and on other secondary career-related outcomes, which may contribute to the understanding of how the intervention works. With regard to the external validity of the trial, a self-selection bias seems to exist with regard to the participation in the intervention, because our sample is on average younger than the target population. Besides, comparing those who completed the required procedure for the enrollment in the program and those who did not, based on the examined study variables, some differences emerged. Specifically, being male, being unemployed as psychologists, and having lower work-self efficacy in terms of commitment represented predictors for taking the intervention offer. With regard to the internal validity, the examination of potential baseline differences between the treatment and control group, after the randomization procedure was completed, revealed that the two groups were statistically equivalent across a wide range of variables, with the exception of the curiosity dimension of career adaptability and employment status. Specifically, the treatment group had lower scores on curiosity and included a higher number of employed participants. In addition, both attrition and compliance with the treatment protocol were also examined. In detail, the attrition rate of participants who did not provide all the three measurement time points was equal to 19.5%, which was acceptable according to what suggested by general recommendations about longitudinal studies and psychological experimental designs (Desmond, Maddux, Johnson, & Confer, 1995; Mason, 1999). The lack of differential attrition between the two groups and of selective attrition based on socio-demographic characteristics, such as gender, age, and employment status, was confirmed at both posttest and follow-up (What Works Clearinghouse, 2013). Therefore, no relevant attrition bias seems to affect the present study. About compliance rate, 100% of control group participants in our study complied with their assigned condition revealing the lack of potential contaminations. Whereas, only 51.2% of treatment group participants complied with at least 80% of the

intervention according to the treatment protocol, as general cut-off assumed in current RCTs (Fergusson, Aaron, Guyatt, & Hebert, 2002; Hernán & Hernández-Diaz, 2012). The high rate of non-compliance (equal to 48.8%) was mostly due to no-shows (29.3%), and was over the acceptable cut-off of 20% of dropouts from the intervention (Furlan, Pennick, Bombardier, & Tulder, 2009). Therefore, the used strategy for testing the short and long term effects of the intervention relied on both the intention-to-treat (ITT) approach, analyzing participants by how they were randomized regardless of their actual compliance with treatment, and the per protocol (PP) approach, excluding participants who did not fully comply with the treatment protocol.

Overall, repeated measures ANOVAs conducted according to the ITT approach did not find an interaction effect (Time X Condition) on the total score of career adaptability, but only on the curiosity dimension, which was also confirmed by sensitivity analyses (using LOCF and MI as imputation methods for missing data). A statistically significant interaction was detected at six-month follow-up, showing an improvement for the treatment group with a close-to-medium effect size. Other small effects, albeit not statistically significant, refer to a long-term improvement in proactive career planning and to a reduction of job search intensity over time, both after the intervention and at six-month follow-up. Overall, the results - despite statistically uncertain - seem to suggest a promising long-term effect on the perception of personal ability to actively plan a future career. In the literature, curiosity is reported as a relevant resource for career adaptability in terms of handling career in a broad and explorative way (Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010; Zikic & Hall, 2009). Curiosity encourages individuals to explore alternatives of themselves and their environment and to see themselves in different roles (Savickas & Porfeli, 2012). In this sense, this result seems to be consistent with the psychodynamic nature of the examined intervention, aimed at developing more mature affective symbolizations revealing the emotional capacity to exploration, knowledge and exchange. Besides, taking into account the specific population of this study - composed of newly qualified professionals - the increase of curiosity is particularly relevant to freelance job, generally requiring higher attitude to business and entrepreneurship in facing the labor market. This result is in line with the detected long-term improvement in proactive career planning in the treatment group, which shows

higher self-efficacy in performing job search behaviors (e.g., planning one's own professional projects, taking new opportunities in the job market and building strategies for the attainment of goals). Indeed, proactivity was found to be associated with a greater tendency to capitalize on opportunities for development, as well as with a meaningful process of career construction (Robitschek & Cook, 1999; Ryff, 2014). The increase of curiosity and proactive career planning may thus suggest a more flexible approach in job search, which is intertwined with better tuning job application to the specific needs of the employer and hence being more convincing (Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010; McArdle, Waters, Briscoe, & Hall, 2007). From this perspective, several explanations can be provided about the reduction of job search intensity found in the treatment group, both after the intervention and at six-month follow-up. With regard to the short term, such a result seems not related to the so-called "lock-in effect", according to which, while participating in programs of active labor market policies, individuals may show reduced job search intensity as well as receive fewer job offers (e.g. van Ours, 2004). This effect seems quite unrealistic in our study, where the intervention was pretty light and not intense enough to reduce the participants' job search effort. Besides, higher career exploration levels (as revealed by the increase of curiosity and proactive career planning) may have counteracted a more focused job-search tendency, which instead directs attention and effort towards targeted job search activities, thus resulting in lower job search intensity over time (Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010). Then, given the nature of our sample composed of psychology professionals, the reduction of job search may also be due to a potential change on expectations about future employment status, moving from a paid job to self-employment. The effect on exploring possible future selves and opportunities may have triggered the participants' tendency to invest in themselves as freelancers, rather than searching for secure and well-defined job positions.

The results from the PP analysis provide further information about how the intervention works in ideal conditions and allows for a deeper understanding of its logical framework. In detail, a medium effect of the intervention is confirmed on curiosity six months after the end of the intervention. Besides, the analyses found a robust significant negative effect on job search intensity on short term (with a small-to-medium effect size) and long term (with a medium effect size), as well as a medium-to-large

increase in affiliation on the long term. Other interesting findings refer to a short-term medium effect on the reduction of work self-efficacy (with a small effect on commitment) and on the increase of autonomy, which persists on the long run (with a medium-to-large effect size). Whereas, on the long term, the treated group showed higher scores on proactive career planning (as in the ITT analysis) and affective investment, and lower scores on manic reparation (with a medium effect size).

Overall, on the short term, the treated participants who fully complied with the protocol showed lower self-efficacy in task performances, such as achieving assigned goals, learning new work methods or concentrating all their energy at work. As well, the increase of autonomy indicated that their affective investment at work was mostly oriented to guarantee self-development, self-determination and freedom from others' control. These two results seem to suggest greater awareness about individual responsibility and active role in career planning and approaching the labor market, consistently with the hypothesis of self-employment as future career orientation. However, this may have triggered the feeling of being scarcely capable of attaining fixed objectives and significantly committing oneself to current or future work. In this regard, workers' recognition of a skill deficit was found to increase levels of anxiety (Loureiro, Severo, Bettencourt, & Ferreira, 2011); as well, previous evaluative research showed that career interventions may also negatively impact on decision-making, because participants acknowledge what they do not know about the job search and career development process, thus resulting in diminished perceived ability (Bullock-Yowell et al., 2014).

Other long-term effects were highlighted by the PP analysis which further sheds light on the intervention impacts on the treated participants. The first finding refers to the increase of affective investment, in terms of psychic relevance attributed to the current or future work context that is perceived as more desirable and effort-worthy (Modell, 2003). Especially, affiliation is positively affected as a drive to "establishing, maintaining, or restoring a positive affective relationship" (McClelland, 1961, p. 160), which was empirically demonstrated to enable stronger relationships, mutual support, openness and innovation (Fisher, Ferreira, Assmar, Redfors & Harb, 2005). Along with the long-term effect on autonomy, the increase of affiliation may indicate that the relationship with the labor market is emotionally characterized by a more complex view on job relations and rules shaping

work contexts. In this regard, the group format of the career program might have promoted higher socialization and exchange among treated participants, thus enhancing support, preventing from isolation, and guaranteeing greater consistency with reality-based interactions that are similar to those emerging in everyday work contexts. The second relevant finding concerns the reduction of manic reparation in the long run, highlighting a lower proneness to resort to magical and immediate forms of restoration in facing career challenges and failures. This result seems to be consistent with the short-term reduction of work self-efficacy, thus suggesting greater realism, because manic reparation generally leads to the over-estimation of one's abilities and narcissistic and grandiose attitudes towards career construction. Indeed, manic reparation is associated with diminished reality-testing and problem solving (Johnson, 2005; Krantz, 2001; Lapierre, 1989), because it is a defense strategy to face depressive feelings, increase confidence and preserve the hope to repair (Kets de Vries, 2010; Roberts, 1994), as well as to foster career adaptability (see Chapter 1). Therefore, the psychodynamic focus of the intervention may have contributed to promote higher recognition of one's responsibility in career failures and of the importance of a relational (rather than individual) orientation, thus lowering manic reparation that is mostly aimed at preserving the self.

Overall, the results of the present study suggest long term promising effects due to the intervention, namely the increase of an explorative and dynamic functioning in approaching the labor market, accompanied with a greater affective investment on work contexts and the lowering of defensive strategies, which may prevent the individual from personal involvement and enrichment thus resulting not effective in the long run. This seems to be intertwined with a higher sense of responsibility about one's competences and prudence in enacting job search behaviors, which suggest a more critical view of the self and more selective search for labor market opportunities.

3.5.1 Limitations of the study

Some limitations should be acknowledged in order to put the results into perspective. First, the sample size of the present study is quite limited and does not always consent to get statistical significance of the results, also because the detected effects have a small size in most of the cases. Despite sensitivity analyses having been performed to handle missing data and 80% of power having been ensured, more

robust conclusions could be derived by replicating the RCT here presented on a wider sample. In addition to this, our results about the effects of the examined intervention cannot be generalized to the entire population of psychology professionals of the involved target population, because a self-selection bias exists with regard to the enrollment in such a career program and the following choice to actually participate in the intervention. In particular, the results cannot be considered valid also for other professionals at the national level, and their trans-cultural validity is almost limited because our sample was entirely composed by Italian respondents. From this perspective, further evaluative studies on other professional populations and cross-cultural research should be conducted in the future, to better deepen the potentialities of the proposed career program. In this regard, it should be acknowledged that such potentialities may be partially underestimated in our study. Indeed, our sample was entirely composed of psychology professionals, who generally are more familiar with psychological techniques and used to reflective practices compared to other professional populations, and thus could have benefitted from the intervention to a more limited extent. Another limitation refers to the high noncompliance rate as a threat to the internal validity of the study, which may lead to biased estimates of program effects. In this sense, albeit the PP analysis may provide further information about how the intervention could work in optimal and ideal circumstances, its findings are not causally robust and should be cautiously discussed. Indeed, even if differences did not emerge between the compliers and non-compliers on the examined study variables, the potential presence of unobserved factors may have affected the participants' compliance with the protocol. Besides this, also due to the limited sample size for conducting subgroup analyses, to date the present findings do not consent to identify participants who may best benefit from such a career program, through heterogeneity analyses. Overall, the lack of similar evaluative studies on the effects of career initiatives grounded on a psychodynamic theoretical framework do not allow more complex and exhaustive interpretations, as well as the comparison with other evidence-based findings. It should be acknowledged that - to a certain extent - the construct of career adaptability (as our primary outcome) may not completely fit to the specific scope and nature of a psychodynamic intervention, thus partly concealing its true and consistent effects.

3.5.2 Implications for practice

The added-value of the present study relies on the potential contribution to the evaluative research on psychodynamic career interventions through the design, implementation and assessment of a group career counseling program. To our knowledge, this is the first RCT conducted to examine the effects of a psychodynamic career intervention. Despite being preliminary and not exhaustive, the results of the present study suggest the potentialities of a psychodynamic approach to deal with career-related issues and the need for further endeavor in this direction. The detected effect sizes seem to fall in a small-to-medium range, consistently with what reported by the most recent meta-analytic studies (Spokane & Nguyen, 2016; Whiston, Li, Goodrich Mitts, & Wright, 2017). Overall, the findings seem to show potential effects of such interventions on the increase of exploration, affective investment and realism about the self, thus revealing the impact on the elaboration of representations and meanings of both self and job, which - as suggested by Lehman et al. (2015) -may activate the integration of subjective desires and objective possibilities.

Overall, the innovative contribution of the present study can be intended both in a theoretical, methodological and pragmatic sense. From a theoretical perspective, this study may fill a gap in the international psychological literature on psychodynamic dimensions involved in career development and construction. Indeed, this study allows the development of previous research findings on the role of affective symbolizations – as unconscious affective processes and emotional expectations – which may affect the relationship with work contexts (Langher, Brancadoro, D'Angeli, & Caputo, 2014), as well as on potential factors fostering career adaptability (Bocciardi, Caputo, Fregonese, Langher, & Sartori, 2017). Besides, because this study simultaneously considers a variety of factors pertaining to the affective, cognitive and behavioral domains, a more complex and coherent logical framework can be provided to further disentangle the relations among the examined career variables. From a methodological viewpoint, the study provides a rigorous empirical evaluation according to counterfactual approach as suggested in career guidance and counselling efficacy studies (Bernes, Bardick, & Orr, 2007). Besides, the longitudinal nature of the trial may allow a deeper understanding of the changes on the affected dimensions over time (Heppner & Heppner, 2003). Because of the

voluntary participation in the career program here proposed, the ITT results provide a more clear view on the effectiveness of such an intervention when offered on a large scale, which may orient policy markers' decisions. Instead, the PP results – albeit out of an experimental approach – can further deepen how the intervention works in optimal conditions.

With regard to pragmatic aspects, the findings from the present study suggest to reconsider the modalities of delivering the intervention as well as the enrollment procedures to participate in the career program, due to the high dropout of participants, especially to the high no-show rate. We have to note that such problems may be more frequent when adult employment population is involved, rather than youth, student population or people in institutionalized settings where participation is mostly mandatory or at least highly recommended. However, it is possible that participating in programs that are not free of charge may trigger a clearer demand for change and greater responsibility in actually completing the program, moreover when such initiatives are offered out of active labor market policies in the public context. Then, the evidence provided by this study may also be useful to orient educational and vocational guidance for psychology undergraduates and favor the transition from university to work settings in a preventive way, before their entering the labor market. The high replicability and transferability of the career program protocol here proposed might, in this sense, allow future experiments on student populations.

CONCLUDING REMARKS

Chapter 1 suggests the relevant contribution of the psychodynamic conceptualization of career adjustment as consisting in mania, envy, manic and true reparation from Klein's object relations theory, as different modes of functioning in facing career failures and challenges. This conceptualization can provide new insights about unconscious processes potentially affecting career decisions and strategies, beyond the limitations of the rational paradigm (Krieshok, Black, & McKay, 2009; Yates, 2015). As well, it overcomes the problems of conceptualization and measurement in the psychoanalytic tradition, which probably prevented the psychodynamic approach from having a substantive presence in current career development literature (Mcllveen, 2014) and career counseling practice (Lehman, Ribeiro, Uvaldo, & Da Silva, 2015). In such a way, this work may be beneficial to enrich the logical framework for the understanding of the patterns and relations among the existing career-related psychological variables, from both a theoretical and a practical perspective. Overall, the findings suggest that mania and envy represent two dysfunctional modes of approaching to work situations which negatively affect one's own perceptions of career development and career outcomes. Thus, they should be taken into account in career interventions as potential clues of dismissing strategies and of scarce propensity to benefit from career guidance or counseling. Whereas, reparation can be regarded as a psychological resource to be further promoted as it may be associated with a more realistic view about the self and the external reality and with higher actual effectiveness in achieving goals in the long run. It is worth noting that also manic reparation -despite being a magical form of restoration- has an adaptive function and does not interfere with career outcomes, probably because it acts as a way to alleviate guilt feelings, increase confidence and preserve the hope to repair. This is particularly meaningful while searching for a job and entering into the labor market, when a rupture in the feeling of life continuity and integrity may occurr - especially in times of extreme uncertainty and instability - and it may be useful to strengthen the perception of personal abilities to cope with transitions (Langher, Caputo, Nannini, & Sturiale, 2016).

With regard to the career counseling intervention proposed in *Chapter 2*, its main potentialities rely on being simultaneously focused on affective, cognitive and behavioral domains, thus affecting several career-related skills and individual variables within a complex and dynamic frame. In terms of its

application, the intervention is suitable for clients across different stages of career path and professional growth, such as the entry into the labor market, work transitions and career development. In addition, it is designed according to what suggested by empirical research on the effectiveness of career interventions, with regard to its length (Brown & Ryan Krane, 2000) and critical ingredients making a significant contribution (Brown at al., 2003; Reese & Miller, 2010). As well, the use of group work with treatment function focusing both on the individuals and group relationships (Lehman et al., 2015; Zimerman, 1993) provides several advantages, such as favoring exploration, collaboration, vicarious learning and mutual exchange. Besides, the relational context of the group may promote reality-based interactions that are similar to those emerging in everyday work contexts and favor higher socialization among participants, thus resulting as more supportive and preventing from isolation.

Overall, the results of the RCT presented in *Chapter 3* reveal promising effects of the intervention on the increase of an explorative and dynamic functioning in approaching the labor market, accompanied with a greater affective investment on work contexts and the lowering of defensive strategies that prevent from personal involvement and enrichment and may be not effective in the long run. This seems to be intertwined with a higher sense of responsibility about one's competences and prudence in enacting job search behaviors, which suggest a more critical view of the self and labor market opportunities. The added-value of the present study relies on the potential contribution to the evaluative research on psychodynamic career interventions through the design, implementation and assessment of a group career counseling program. To our knowledge, this is the first RCT conducted to examine the effects of a psychodynamic career intervention. Despite being preliminary and not exhaustive, the results of the present study suggest the potentialities of a psychodynamic approach to deal with career-related issues and the need for further endeavor in this direction. In conclusion, the results of this work can provide training and career development professionals with psychodynamic and clinical issues to be considered in program design for guidance and career interventions. As well, this contribution may enrich the psychoanalytic field by integrating psychoanalytic constructs and their operationalization in empirical research, thus providing potential useful suggestions for dealing with such issues also in clinical practice.

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